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"Scire est nescire, nisi id me
Scire alius sciret."

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RHEUMATIC CARDITIS IN CHILDHOOD.

BY

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THESE remarks are prompted by a survey of four recent autopsies and sixty-five cases seen during the past few years. For my pathological notes I am indebted to Dr. Michell Clarke, Dr. Cecil Williams, and Dr. T. E. Holmes. Of the clinical cases twenty-four are my own out-patients, and the remainder in-patients at St. Mary's Hospital and at the Children's Hospital, Bristol, the notes of which I am able to use by the kindness of those physicians under whom the children were admitted. The in-patients show a larger percentage of severe types of carditis than the out-patients, as one might expect. Of seventy-five children seen in Bristol with various rheumatic disorders, forty-five, or 60 per cent., had rheumatic carditis. Forty of the cases are girls, twenty-five boys; the boys are relatively more liable to the severer forms of rheumatic heart disease. The age at which the first evidence of rheumatic

infection was seen varied from $3\frac{1}{2}$ to 14, and averaged 8. In only six, at the most, did the cardiac symptoms precede other rheumatic phenomena.

The pathology of rheumatic carditis presents four salient points. *First*, it is a carditis; for example, in my four autopsies the endocardium and myocardium were inflamed in each instance, and the pericardium three times. *Second*, the rheumatic infection is blood-borne, and attacks the heart just as it would any other organ, by way of its own special nutritional blood supply, in this instance the coronary arteries. That this is so is suggested by the simultaneous invasion of all three layers of the cardiac wall and by the position of the lesions, periarterial in the muscular and primarily subendothelial in the serous layers. Further, acute arteritis and other infective lesions may be met with in the coronary arteries in rheumatic carditis. In my four cases there was subendothelial fatty change at the root of the aorta, in the area fed from the coronary arteries. *Third*, the gravity of rheumatic carditis in the earliest or "childhood" stage lies mainly in the damage done to the muscle. This is on a priori grounds to be expected; the heart's main functions are muscular, and the serous layers clothing the myocardium are merely accessories to the easy and effective performance of those functions. Both clinically and after death the great feature of acute rheumatic carditis is ventricular dilatation, as has been so ably shown by Dr. Lees and Poynton.[2] In later years the permanent serous lesions become important; by that time the myocardium shows little trace either in its histology or in its functional capabilities of the damage inflicted upon it at the time of the invasion. *Fourth*, rheumatic carditis, like all rheumatic lesions, is remarkably apt to recur—or should it be said to recrudesce? Perhaps the infective agent lies quiet in the cardiac tissues awaiting opportunity to reassert itself; perhaps it is stored elsewhere in the body, and issues thence at intervals to infect the heart again. It is worthy of remark that in all my four autopsies (and in others I have seen)

[1] For larger statistics see Poynton, *Med.-Chir. Tr.*, 1899, lxxxii. 355. This paper is referred to later in this article.

[2] *Med. Chir. Tr.*, 1898, lxxxi. 419.

the interbronchial lymph-glands were much enlarged. Be this as it may, certain it is that the recurrences lead to the establishment of permanent fibrosis, eventually more important in the serous than in the muscular layers; in the early acute stages, however, it is the myocarditis that kills.

This way of regarding rheumatic heart disease, that is, as a carditis principally important in childhood by reason of the muscular lesions, is confirmed by clinical experience. Of my sixty-five cases, no less than thirty-eight presented certain physical signs about to be described; and of the remaining twenty-seven, ten were of the same kind, but the signs were incompletely developed. They were like enough to those in the larger group, however, to make one think them due to the same pathological process occurring in a less severe degree.

The typical physical signs are as follows. On inspection, the impulse is seen over an area extending from the left sternal border, or even from the right of the sternum, to an inch or more outside the left mammary line, and from the third left space above to the fifth or sixth left space below. It is usually possible to see that the impulse is wavelike or peristaltic in character; the wave begins at the sternal ends of the third and fourth left spaces, and travels downwards and outwards to disappear outside the nipple in the fifth or sixth left space. As it reaches this latter extreme an apparent sinking-in is noticed in those spaces where the wave was first seen. This gives an impression of systolic retraction, yet it is in reality not a retraction but merely a rebound, the chest-wall falling back into the position which it occupied before it was thrust forward by the contracting heart. The point of maximum impulse is at or external to the left mammary line, usually in the fifth space; here it is so firm and well-sustained in the average quiescent case as to prove the presence of ventricular hypertrophy. At the inner end of the third left space a sharp diastolic shock is felt, presumably due to an abrupt forcible closure of the pulmonary valves under the influence of hypertension in the lesser circulation. Sometimes the peristalsis I have described is so vibratile as to give the impression of a presystolic thrill; this, however, is never so rough, powerful and

definite as the thrill of mitral stenosis. I have felt a systolic thrill at and external to the apex. The deep cardiac dulness is transversely increased both to right and to left; it may even extend from the right mammary line to the left mid-axillary line.

The auscultatory signs at the apex show a certain progress. The first departure from the normal is a lengthening and blurring of the first sound; then a definite systolic bruit develops after the first sound, which may finally replace it. This is transmitted into the axilla and, of course, indicates mitral leakage. Next the apical second sound becomes doubled, and then, but often not till some time after, a murmur is added to the second half of this second sound. This, hard to distinguish at first, lengthens and strengthens till at last it runs into the beginning of the next cycle, becoming, in fact, a presystolic murmur. This is not as rough and loud as that of mitral obstruction, and it is not due to valvular disease.

At the base the only noteworthy feature is a tremendous accentuation of the pulmonic second sound, which is often doubled also; the explanation of this accentuation is, of course, the usual one—raised tension in the pulmonary artery.

Now these signs—outward displacement of the apex-beat, widened area of impulse, abnormally ready perception of the peristaltic nature of systole, increase of the transverse cardiac dulness on both sides, the murmur of mitral incompetence, and the signs of raised pulmonary tension—are all due to a dilatation of both ventricles. That there is hypertrophy is suggested by the firm character of the impulse at its maximum point; but the principal feature is dilatation. The ventricles have stretched because their walls are atonic, and the atony is due to the action of the rheumatic virus upon the myocardium.

From time to time the dilatation, which has been partially recovered from in the interval, is acutely exaggerated by a fresh infection of the heart muscle; not infrequently this is so damaging to the myocardial cells as to lead to a fatal asystole. *Post-mortem*, the heart is enlarged transversely and globular, owing to ventricular dilatation; the auriculo-ventricular orifices are stretched, and the ventricular walls are thickened. The muscle

may be pale, but naked-eye changes are usually insignificant. There may or may not be evidences of pericardial or endocardial infection; more often than not such lesions are present, but of no great gravity. Sections of the myocardium show perivascular areas of leucocytosis with proliferative inflammation of the stroma, leading eventually to a permanent fibrosis; and in the parenchyma loss of striation and fatty change.[1]

Three of the cases I examined *post-mortem* had during life presented those signs which have been already described; in two of them there was in addition a pericardial rub, and in these two there was an early fibrinous pericarditis. In all three the valves were inflamed—the mitral in three, the aorta in two, and tricuspid in one; the lesions were of the usual type, circumscribed nodules capped with a little fibrin. In none of the three, however, were these lesions sufficient to account for death, or even for cardiac embarrassment; but in all three there was considerable ventricular dilatation, associated with some thickening of the muscle, and with the microscopical appearances already mentioned as occurring in the myocardium.

In the fourth case there were similar myocardial and valvular changes, but in addition there were lesions of the pericardium, which during life had notably altered the physical signs from those already described. The modifications which may thus arise from special types of inflammatory change in the serous layers remain to be outlined.

In both endocardium and pericardium the reaction to rheumatic infection may for convenience' sake be divided into three stages: the acute, the recurrent, and the cicatricial. It is with the first two that childhood is mainly concerned. In the pericardium (to consider the first) there is a more or less acute reaction to the first invasion, which occurs, of course, by way of the coronary circulation; as this subsides the fibrin which has been thrown down is partly reabsorbed and partly used as the basis for new fibrous tissue. Recurrences (or recrudescences) take place repeatedly, and the pericardial sac is gradually obliterated; but

[1] See papers by Poynton (*Lancet*, 1900, i. 1352), Fisher (*Lancet*, 1902, i. 1594), West, Herringham, Carpenter and others.

it is only when there are also pericardio-mediastinal adhesions that really grave and specific effects are produced, and in such cases cardiac failure is much more likely to occur than in the absence of this complication. Clinically, the acute is not the commonest phase of rheumatic pericarditis in childhood: only one true example occurred in my sixty-five cases. It is characterised by rapid increase in the area of cardiac dulness, which is due to ventricular dilatation, and not to effusion of fluid (which, as Poynton's figures show, is rare, if not unknown, in rheumatic carditis), and by a friction sound over the whole præcordium. It appears to terminate in resolution, but in reality it leads to the first instalment of those obliterating adhesions already spoken of.

The recurrent stage is commonest clinically; it was exemplified by six of my cases, five of whom were boys. Slight pyrexia, with dyspnœa and perhaps cardiac pain, leads to an examination of the heart, which is found dilated; friction sounds are heard, often for a day or two only, over a limited fraction of the præcordium, and the whole attack soon subsides. Probably its real nature is often overlooked, especially as the rub may be pleuro-pericardial and respiratory in rhythm.

There was no good example of the cicatricial stage among my sixty-five children; adhesions strong and dense enough to produce systolic recession take so long in building that childhood is gone before signs appear. My fourth autopsy was, however, upon a case of this type, a boy of 13, admitted to the Bristol General Hospital under Dr. Michell Clarke. The heart was encased in a dense mat of adhesions, fully half an inch thick over the ventricles. Myocarditis was proved by microscopy, and the valves were beaded. The adhesions bound the pericardial layers together and the heart as a whole to the surrounding tissues. This boy had during life shown unmistakable systolic recession.

Rheumatic infection of the endocardium is usually limited by the local reactive processes to the deeper parts of the valves, where it arrives by way of the coronary circulation; circumscribed nodules are formed, and permanent cicatrisation generally, if not invariably, follows. Sometimes, however, the resistance

is lowered either locally by preformed fibrosis, or generally by some malnutritive state, and the organisms find their way to the surface of the valve, forming an infective ulcer, "pointing," in fact, into the cardiac cavity. How is the first type, the commoner circumscribed form of endocarditis, to be linked with the extreme cicatrisation seen in ordinary mitral stenosis? Is there constant irritation by a latent infection, or are there repeated reinfections? This cannot as yet be answered; all that can be definitely said is that advanced cicatrisation is not common before the age of 16.

Clinically, the circumscribed type of rheumatic endocarditis is perceptible in its acute stage only when the aortic valves are swollen, and by no means always then. The only evidence is a diastolic bruit, usually very indistinct, for the cicatricial stage must be reached before the ordinary signs of aortic insufficiency are noted. In at least one of my cases an aortic regurgitant murmur appeared and disappeared again in so short a time as to leave an impression of subsiding inflammation which had temporarily crippled the valve. A similar affection of the mitral valve produces no special signs, as the valve is already incompetent by reason of myocardial weakness. The systolic murmur is myocardial, and not endocardial in its origin.

The malignant type of rheumatic endocarditis was not represented among my cases. Figures bearing on its frequency will be found in the writings of Osler[1] and Glynn.[2]

The recurrent and cicatricial stages of rheumatic endocarditis make themselves apparent only by the disablement of the valves which they produce. For all practical purposes we may consider aortic incompetence and mitral obstruction as the two perversions of the valvular functions resulting from such disablement; and neither of these conditions is common, in well-developed form, in childhood. A presystolic murmur and thrill do not necessarily mean mitral stenosis in rheumatic children. *Post-mortem*, the valves are usually found to show evidence of early fibrosis, but the condition is quite unworthy to be classed as "stenosis." It is not surprising, therefore, that in none of my cases was an unmistakable stenosis present. No doubt many of them will

[1] Goulstonian Lectures, 1885. [2] Lumleian Lectures, 1903.

show it in later years; but it had not had time to develop at 16.

Aortic incompetence was present in thirteen out of my sixty-five cases, but this must not be taken to indicate a preponderance of aortic over mitral lesions as the effect of rheumatism. It simply means that the aortic valves are easily and quickly rendered incompetent, while it needs a good deal of fibrosis to obstruct the mitral orifice. As a matter of fact, rheumatism attacks the mitral valves nearly three times as often as the aortic (Poynton), a figure supported by some observations of my own. Of 155 cases of valvular disease examined by me at St. Mary's Hospital, there were 99 purely mitral cases, 34 purely aortic; of the former 82 per cent. gave a history of acute rheumatism, of the latter 35 per cent. only. The remainder were cases of combined aortic and mitral disease, of whom 77 per cent. gave a similar history.

There is no space here for a discussion of the prognosis or of the lines of treatment. The object of the paper is to show that for the production of those signs which are met with in the great majority of cases of rheumatic carditis in childhood it is quite unnecessary to blame the valves or the pericardium; the myocardial changes which are always present are enough to account for everything. There are, however, modifications of the fundamental clinical picture due to special types of inflammatory change in the serous layers. Of these the commonest are aortic incompetence and recurrent pericarditis, which, I may add, not infrequently coincide in the same patient.

TREATMENT OF GRAVES'S DISEASE BY ANTI-THYREOID SERUM AND BY X-RAYS.[1]

BY

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IT may be well, before passing to the subject of treatment, to recall briefly the chief theories as to the nature of Graves's disease. Unfortunately the pathology of this affection is still very obscure, and the exact way in which it is produced uncertain.

Undoubtedly many of the most striking symptoms are brought about through the medium of the sympathetic, but there is no evidence that the disease originates in an affection of the sympathetic; and similarly, though the three cardinal symptoms have been produced by experimental lesion of the restiform bodies, and though there is even a stronger point in favour of the theory which would attribute the disease to a lesion of the medulla oblongata, namely that morbid changes are fairly constantly found there, there is no sufficient proof that these lesions cause Graves's disease or are more than secondary ones. The theory that it is due to hypersecretion of the thyroid has perhaps more to support it. Myxœdema is in some respects the antithesis of Graves's disease, and we know that the former depends on an absence of the thyroid secretion. Again, much has been made of the resemblance between the symptoms of Graves's disease and those produced by an overdose of thyroid extract; but though there is a certain analogy between the two conditions, it must be objected that no one has ever yet succeeded in producing the full clinical picture of Graves's disease by administering thyroid extract.

It was on the supposition that the disease depended on a

[1] Read at a meeting of the Bristol Medico-Chirurgical Society held at Weston-super-Mare on June 12th, 1907.

hypersecretion by the thyroid that Möbius advised the use of serum from thyroidectomised goats. He supposed that in the serum of such animals there would accumulate an excess of antibodies (to the thyroid), and that these, when ingested by the patient suffering from Graves's disease, would neutralise the excess of thyroid secretion in them.

Numerous observers have published good results obtained from the use of such sera. The serum was at first injected, but was afterwards found to be equally efficacious by the mouth. Good results have also been alleged from the use of Rodagen—the milk of thyroidectomised goats—given in the form of tablets.

I give my experience of the use of these remedies below. Of the new serum prepared by Rogers and Beebe I have had no experience; their method is also founded on the thyroid hypersecretion theory of Graves's disease, but based on a different principle. They first endeavoured to find out how the thyroid secretion in this disease differs from that in health, obviously a most important point, and one not satisfactorily settled. As a result of an extensive investigation, Oswald says that the only difference between the two is that the thyroid secretion in Graves's disease contains less iodine. The objects at which Rogers and Beebe aimed are (1) to neutralise toxic substances, and (2) to stop their production in quantity. From the nucleo-proteids of certain organs they prepared a serum which had a specific cytolytic effect on these organs, by inoculating rabbits (1) with nucleo-proteids and thyroglobulins from the thyroid glands of fatal cases of Graves's disease, and (2) with the same substances from normal thyroids. After a definite number of injections, the activity of the serum of these animals was determined by an agglutinin test and injections made into patients with Graves's disease. They claim that of the cases thus treated 11 were cured, 43 improved, and 15 were unaffected.

I have treated three well-marked cases of exophthalmic goître with Rodagen; the patients improved—but I think not more than most cases improve by rest in hospital—and I was not able to trace any distinct effect from the remedy. I give the details of one case.

Case 1.—Rosina H., æt. 26. Duration of thyroid swelling, tachycardia, and tremor with general weakness, &c., nine years. Exophthalmos first appeared eighteen months previous to admission. Her condition has varied from time to time, being sometimes better, sometimes worse; after each of her two confinements she was decidedly worse. On admission she had marked exophthalmos, pulsating goître and tremor; pulse-rate 140. The heart was slightly enlarged, and there was a systolic apex murmur. For the first week, under ordinary treatment by rest, phosphate of soda and glycero-phosphates, the patient felt better, and the pulse-rate was from 118—130. From November 29th to December 12th Rodagen was given in half-drachm doses three times a day. The pulse varied from 118—130; the neck measurement remained the same. The patient declared herself to be feeling decidedly improved, and there was obviously a general improvement in her condition. From December 12th to 20th Rodagen was stopped without making any apparent difference, and was given again from December 20th to January 23rd. The pulse-rate remained the same, proptosis and thyroid enlargement unaltered, heart's action less excited. There was less tremor, and she said the palpitation was less. As a result of the seven weeks' treatment she gained 8 lb. in weight. Subsequently this patient was treated with Möbius's antithyreoid serum, in a dose of 5 cc. daily for about three weeks. The patient continued to show improvement on her state on admission. The tremor became decidedly less, and the pulse-rate 112—120. No other objective sign of improvement was noted, but she stated that she felt very much better.

The following cases were treated with antithyreoid serum (Möbius):—

Case 2.—Louisa B., æt. 36, married. Never good health. Duration of illness, two years. Goître, palpitation, exophthalmos, tremor. No cardiac enlargement, no apex murmur. Dyspepsia and vomiting, throbbing of vessels. Admitted March 15th, 1907. Pulse-rate 140 on admission; this with rest dropped to 106 in six days. Neck measured thirteen inches in circumference. March 21st: Antithyreoid serum 5 cc. every other day, and bismuth mixture for indigestion. On April 3rd condition much the same, but pulse-rate 96. She said her neck felt smaller, and it was one inch less on measurement. April 9th, pulse 120. As she said she did not feel so well, and that the heart beat faster after taking the serum, the pulse-rate was taken every hour for eight hours after the dose. It was found that no essential difference could be made out in the pulse-rate after the dose from that on the days that she did not take the serum. The only change was, that on the average the pulse-rate on four occasions was

about 10 beats to the minute slower for some hours after the serum, viz. 112—114 instead of 124. On April 17th pulse-rate was 112, perspirations were less profuse, tremors same, general condition was improved. Five cc. antithyreoid serum had been taken every other day from March 21st to April 3rd; 10 cc. from April 3rd to April 18th. The following estimations were made of the nitrogen in the food and urine; that in the fæces was not determined; the bowels were moved regularly once a day, and there was no diarrhœa. On April 17th 10 cc. serum were given, and she had been taking it since March 21st. Her weight was 45 kilos. The food taken on this day contained 1,800 calories; the nitrogen in the food was 147.5 grains, and nitrogen excreted in urine 126.7 (as urea and in purin bodies separately estimated). On a later day, when no serum had been taken for three days, she took a larger amount of food—over 2,300 calories—and the nitrogen ingested and excreted, estimated in the same way, was respectively 176 and 140 grains.

Case 3.—Margaret E., æt. 18. This patient was in the Hospital in the autumn of 1906 with hysterical mutism, anorexia nervosa, tachycardia, tremor and exophthalmos. She was profoundly emaciated, weighing 5 st. 10 lb., whilst her height was 5 ft. 10 in. Under Weir-Mitchell treatment, her weight went up to 8 st. 9 lb. She left the Hospital after three months with a pulse of 140. There was then no thyroid swelling, but this appeared shortly afterwards. Readmitted March 28th, 1907, she was well nourished, with marked exophthalmos, pulsating goître, tremor, profuse sweats, and loss of power in the legs. Pulse-rate, 140; heart slightly enlarged, with a loud systolic murmur all over the præcordia. She was ordered antithyreoid serum in dose of 5 cc. every other day. After a week this dose was given daily, and then she took 10 cc. every other day for another week, and during the fourth week 10 cc. every day. Duration of treatment, April 1st to 28th inclusive. No appreciable effect was noticed during the time the serum was administered. On April 1st, on beginning treatment, pulse-rate was 144; on April 7th it was 140; on 17th it dropped to 112; but on April 24th was 150, and on May 15th was 150; on June 5th, 135. The respiration was 30. Sweats remained undiminished; exophthalmos same. The goître—a large one, circumference of neck being fifteen inches—was unaltered; tremor perhaps less. On the other hand, she expressed herself as feeling better and stronger, and suffering less from palpitation; she slept better, and her appetite improved. The quantity of urine averaged 44—45 oz. per diem at the commencement of the serum treatment; dropped to about 30 oz. per diem at the end of it, and for three weeks afterwards. This patient was paraplegic; the paraplegia, which presented some of the features of hysterical paraplegia in the absence of muscular wasting, of

alteration of the reflexes, of dulling of sensation to pain (pin-prick) and of the muscular sense, did not improve under serum treatment. The patient developed a very large appetite; her weight was 9 stone. On April 17th, 18th, the amount of food taken was as follows:—

	17th.	18th.
Nitrogen in food	204.2 grains.	197.6 grains.
Nitrogen excreted in urine (urea and purin bodies) .	206.7 ,,	211.5 ,,

The nitrogen in the fæces was not estimated; there was one daily action of the bowels, so that apparently there was some loss of nitrogen during the time the serum was taken. On May 5th, about a week after serum had been discontinued:

Total nitrogen in food	223 grains.
Nitrogen excreted in urine	212 ,,

Case 4.—Gladys J., 19 years. First symptoms: goître, exophthalmos, palpitation, appeared six to seven months previous to admission. On admission there were a large pulsating goître with thrill, a moderate degree of exophthalmos, a marked tremor, and tachycardia. Pulse 132, no enlargement of heart, a systolic pulmonary but no apex murmur, and anæmia. Under six weeks' treatment by rest, constant current to neck, strophanthus, belladonna and iron, little or no improvement took place. Pulse-rate averaged 140. From September 14th to 28th she was given antithyreoid serum 5 cc. every other day, all other treatment being stopped. At the end of this time there was slight improvement, consisting of less pulsation in the thyroid, with a diminution in the circumference of the neck from fourteen to thirteen inches, less tremor, and a pulse-rate of 130—124. In other respects the condition was unchanged, and she left the Hospital at her own request a week later without any very material change in her state.

Case 5.—Lily T., æt. 26. Symptoms attributed to a fall in August, 1905, when she struck her head, and was in bad health for some time afterwards. Tachycardia, exophthalmos and goître appeared November, 1905. On admission, April, 1906: pulse 110, no cardiac enlargement or murmur, marked tremor, slight exophthalmos, and small goître, chiefly of right lateral lobe of thyroid. She suffered from constant profuse perspirations. Blood pressure, 120 mm. Hg. From April 5th to 30th, 1906, she was treated by rest in bed, by antithyreoid serum, 3i, given twice daily; and, as she slept badly, an occasional dose of Veronal at night. This was a mild case. She certainly improved under treatment; the pulse-rate fell to 88—98, the blood pressure to 105 mm. Hg. There was less tremor, less exophthalmos; her general condition improved; she became less nervous, and

recovered her sleep. On the other hand, the profuse perspirations were unchanged. She gained a few pounds in weight. After April 30th the antithyreoid serum was stopped, and she was given belladonna, with application of a constant current to the neck. There was no material change in her state, the improvement being maintained, but she varied from day to day, having bad days, in which the palpitation was again severe.

In the following cases treatment was by X-rays :—

Case 5 remained in much the same state until August, 1906. From August 11th to November 10th she was treated by X-rays, attending as an out-patient three to four times a week for that purpose. The X-rays were applied over the thyroid gland for ten minutes at each sitting, thirty-four sittings in all. No distinct effect was observed from this course of treatment, except that there was some diminution in the size of the goître.

Case 6.—Ida N., æt. 27, was treated by X-rays. Admitted July 31st, 1906. She had had no previous illness, except rheumatic fever two years ago. The present illness began three years ago with a pulsating goître, palpitation and tachycardia. This attack lasted six weeks, and was relieved by rest at a convalescent home. Symptoms returned March, 1906, and continued until admission. On examination there were a large pulsating goître, marked tremor, slight exophthalmos, pulse-rate 108, pigmentation of upper eyelids, and a systolic murmur at apex. From August 4th to September 19th she was treated by application of X-rays to the thyroid on four days a week, for ten minutes at each sitting. At the end of this time the neck measured about the same, pulse-rate 112, pulsation in vessels same, tremor decidedly less. She had lost 4 lb. in weight. She said herself that she felt better. The X-rays were then omitted for a week without any material change in her condition, except that she gained 2 lb. in weight. Treatment by X-rays was resumed on September 26th, and continued until November 10th ; during this time she was an out-patient. She gained weight slowly but steadily during this period, gaining 6 lb. in all. Her pulse remained at 108, the tremor was still present but less. Sleep was good, and she had a good appetite, but suffered from dyspepsia. On the whole, slight general improvement.

Case 7.—Nellie B., æt. 23. Illness stated to have begun six months previously. She had taken thyroid extract for psoriasis. On examination there was left-sided exophthalmos, slight left ptosis, a large pulsating goître, pulse-rate 125—130, marked tremor, profuse sweats and general nervousness. Treatment with X-rays was carried out in the same way as in the other patients, forty-three sittings being given in all between August 10th and

November 3rd, 1906. In this case the pulse-rate fell to an average of 116 in October and to 98—100 in November, the goître became smaller, the tremor and sweats less, and the patient felt generally better.

Of another case treated by the X-rays for six weeks I need not give the details, as although a diminution in the size of the thyroid, and a temporary fall in the pulse-rate occurred, except for the former, there was no permanent alteration in the patient's state as a result of treatment.

There is great difficulty in estimating at its true value any mode of treatment of Graves's disease. The malady is not a fatal one; in a case of average severity it may not materially shorten life. It is not steadily progressive; remarkable ameliorations occur in the natural course of the illness, and these remissions may last a long time. Further, most of the symptoms are directly produced by functional disorders of the nervous system, For many of these we have to depend on the statements and on the subjective feelings of the patient; and even of those which can be objectively observed, some are of such a nature as to be influenced by nervous states. The symptoms generally are easily affected by changes, for good or bad, in the general conditions of life. In hospital in-patient practice the effect of treatment is particularly difficult to judge, for the improved conditions arising from good food, rest, freedom from harassing family cares, well-ventilated wards, and general care to maintain the bodily functions in good order, nearly always result in considerable improvement in the patient's health, and are just those best adapted to counteract the disabilities of the disease.

On looking over notes of old cases treated simply by rest, a full diet, tonics, belladonna, and electricity to the thyroid gland, I find that in nearly every case the patient went out better. This statement must be modified to the extent that no patient left the Hospital cured. Goître, exophthalmos, pulse-rate, tremor, sweats, might all be less, but still remained to some extent. Thus I do not find a pulse-rate below 90. The symptoms most completely relieved were "nervousness," tremor, palpitation or subjective sense of pulsation in vessels, sweatings, and sense of

suffocation or difficulty of breathing from enlarged thyroid, and together with this relief a general increase of strength and of well-being.

Compared with the ordinary results of hospital treatment, I did not find any striking advantage from the use of antithyreoid serum, though it must be said that the patients certainly declare themselves as feeling much better, more than they usually do under ordinary treatment. So far as I am aware, they did not know that they were taking a new remedy. There was no especial point to notice, except that in two of the cases, so far as observations went, there was an increase of nitrogenous excretion by the urine, and in one the quantity of urine passed was decreased. The expense of the serum is a decided disadvantage.

With regard to the X-rays, more experience is required; as the patients were out-patients, the treatment by X-rays was the only change from their ordinary condition. In one case, which was anomalous in its alleged mode of origin, their use appeared to be attended with marked and permanent benefit. The others "felt better," and there was a slight diminution in pulse-rate during treatment, which was not, however, permanent. In one respect I think the X-rays may be of advantage, and that is in diminishing the size of the goître; this diminution was permanent in three cases, and with it the patients lost the feeling of suffocation, of which they had occasionally complained. In one patient there were marked fluctuations in weight; but though weight was lost during a first course of X-rays, it was gained during a second. Such fluctuations also occur, with remissions, in the natural course of the disease.

It may be added that in each case the urine was normal, and that, from what is now known of treatment by X-rays, it would probably be inadvisable to use them in any case where the kidneys were not sound.

I am much indebted to my colleague, Dr. W. K. Wills, for the care with which he carried out this part of the treatment.

CEREBRAL LESIONS IN PREGNANCY AND PARTURITION.

BY

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ORGANIC cerebral lesions may occur in the course of pregnancy and parturition with the same relative frequency as in the absence of these conditions, but their coincidence may, under certain circumstances, give rise to considerable difficulties in diagnosis.

In addition to symptoms due to organic lesions of the brain and cord, several forms of neurosis may occur which simulate them in a greater or less degree, and give rise to difficulties in diagnosis and treatment which may lead to mistakes, both in treatment and prognosis, of a character by no means trivial.

The position is also complicated by the fact that various functional neuroses, with symptoms superficailly resembling those of organic cerebral lesions, are liable to occur during both pregnancy and the puerperal state, *e.g.* affections of speech, apparent loss or impairment of vision, affections of hearing and paretic conditions are met with not infrequently; while inflammatory cerebral lesions, with their accompanying symptoms in the puerperium, will almost certainly be attributed in the first instance to uterine sepsis, with which, it must be stated, there is occasionally a definite causal connection. Paralyses of the lower limbs alone are not infrequent, owing to the liability of the nerve tissues in the pelvis to mechanical pressure; these may be attributed to lesions of the cord, and it is not unknown for cases superficially or even intimately resembling, *e.g.*, spastic paraplegia to arise, or at any rate to display their first symptoms after parturition. The writer has quite recently met with a case of this kind, in which paraplegic symptoms with spastic phenomena supervened on a

difficult labour, but proved on careful investigation not to be due to a definite descending spinal lesion, the symptoms of which they much resembled.

Such cases as this do not come within the purview of this paper, which is concerned more especially with cases in which the symptoms indicated an organic cerebral lesion.

Case 1.—A multipara, æt. 37, was delivered by a midwife, who summoned the writer on the day following delivery because the patient was paralysed. I found her to be suffering from marked right-sided hemiplegia, with interference with speech. She was quite unable to articulate distinctly ; although she would make attempts to pronounce the words she wished to use, she could not do so in such a way as to make them recognisable. Some facial paralysis was present. The whole condition cleared up in about ten days, the paralysis passing off and her power of articulation returning. The lesion was regarded as being due to a thrombosis of the left middle cerebral artery or one of its branches.

Case 2.—A multipara, æt. 22, was delivered on the 27th of January, 1901, labour being normal in every respect. Two days later, during which time she had suffered from severe headache and rise of temperature, which was attributed to septic infection, and for which her uterus was washed out, she became comatose, and died very shortly afterwards. An autopsy was made, and to the surprise of everyone concerned pus was found over the whole upper surface of the cerebral hemispheres and anterior third of the cerebellum ; also between the lobes of the cerebellum and along the whole length of the cord. Numerous cocci were found in the pus, including a diplococcus which stained feebly with Gram. The cause of death was obviously suppurative cerebro-spinal meningitis.

Case 3.—A patient who was at about the end of the seventh month of pregnancy was admitted into the Bristol Royal Infirmary in a state of coma. She had some slight convulsive movements, her urine was albuminous, temperature 102° F., pulse 110, and respirations 50 ; a little later her temperature was 103° F., pulse 110, and respirations 72, the coma increasing. She was wet-cupped at once, and the usual remedies for eclampsia used in the interval between her admission and my seeing her. On seeing her, I expressed a doubt as to her suffering from eclampsia, and hazarded the suggestion that she was in reality suffering from an inflammatory cerebral lesion, possibly meningitis ; but of this there were no definite symptoms, except that her general aspect and the character of the convulsive movements reminded me of

the appearance of children suffering from meningitis. She delivered herself twenty hours later of a premature stillborn child, and died four hours later. *Post-mortem:* Suppurative meningitis of the brain and cord was found. The pus contained numerous staphylococci, and in addition a diplococcus resembling Fraenkel's.

Case 4.—A multipara, aged about 40, was admitted in a state of coma, with convulsive movements and albuminous urine, as suffering from eclampsia. She was in the ninth month of pregnancy, and was delivered by *accouchment forcée* but died within two hours of delivery. *Post-mortem:* There was found at the upper part of the right temporal lobe a cyst filled with fluid as big as the fist, and a second cyst of less size was found in the lower right frontal lobe. The kidneys were granular.

Case 5.—A multipara, aged 28, on the tenth day after delivery developed a temperature of 103° F., after a convulsive seizure, which was chiefly marked on the left side; her temperature gradually rose, and she rapidly became comatose, but no more fits occurred. When I saw her there was an occasional tremor of the left arm and leg, associated with marked rigidity of these limbs, deviation of the eyes to the right, and some facial paralysis. She had suffered from a discharge from the right ear. She died about eight hours later, and no autopsy was made. This was probably a case of cerebral abscess with rupture following on middle ear disease.

From a practical point of view, the importance of these cases resolves itself into considerations of diagnosis and prognosis, since in the last case only could treatment have had any marked effect. In Case 1 there was no great difficulty, except that either the hemiplegia, affection of speech, or facial paralysis might, if they had existed alone, been possibly functional.

The presence of these three conditions simultaneously, however, appeared to me to indicate a gross cerebral lesion, while the comparatively rapid recovery and the fact that the paralyses and affection of speech were not absolute seemed to me to point to a thrombosis rather than an embolus or hemorrhage.

In Case 2 the only clue to the real source of the symptoms lay in the acute headache and ingravescent coma, with high fever.

In such a case one's first thought would be naturally that uterine sepsis was the cause, the only possibility of excluding

which would be to prove that the uterus was germ-free by culture. Cerebro-spinal meningitis was never dreamt of as a possible cause of the symptoms, or a lumbar puncture would in all probability have cleared up the diagnosis. One point in connection with this case is worth recording: in the majority of cases in which suppurative cerebro-spinal meningitis has been found as a complication of the puerperium uterine sepsis has been present.

This, after all, is not surprising; but the rapid death in this case almost precludes that possibility, while at the autopsy no focus of septic infection was found. There is no record as to whether a culture was taken from the uterine cavity.

The infection must almost certainly have been present at the time of delivery, as the patient was complaining of headache then.

In the third case a quite justifiable diagnosis of eclampsia was made. I did not agree with this, in spite of the albuminous urine, because the so-called fits in no way resembled eclamptic seizures as I have seen them, and, moreover, in eclampsia a markedly febrile temperature does not as a rule occur except after several fits, and when it does is of very grave prognostic import.

The rapid respirations rather suggested pneumonia, but no physical signs could be found.

None of the usual symptoms attributed to meningitis were present in any noticeable degree, and I greatly regret that, having hazarded the suggestion that cerebro-spinal meningitis was the cause of the trouble, I did not at once proceed to verify this by lumbar puncture.

In Case 4 the fits were probably eclamptic, and the cysts present simply a coincidence.

In Case 5 the febrile temperature, increasing coma, left-sided spasm and rigidity rather indicated the presence of a localised cerebral inflammatory process than an attack of eclampsia, which was the provisional primary diagnosis. In this case possibly surgical intervention might have succeeded had her condition been such as to call the attention of her medical attendant or to alarm her friends earlier. As it was, her own attendant was not sent for until she was obviously very ill, and when I saw her she was moribund.

Prognosis.— In any case similar to those mentioned above prognosis cannot be too guarded if a gross cerebral lesion is probable, and especially if it appears to be of an inflammatory origin. Whether in connection with pregnancy or not, this may be looked upon as the rule.

A mistake in diagnosis is quite likely, and in the majority of such cases quite pardonable, even with a practitioner of experience. In the cases of meningitis it is extremely doubtful if an accurate diagnosis would have been of the least value.

It is barely possible that the injection of an antiseptic through the lumbar puncture might have some effect ; in any case it could hardly hasten the certain fatal event ; or it is again possible that injection of a polyvalent serum might prove of some use, or at any rate of little harm. The rapid fatality of the affection gives but little time for anything of the kind, however, and in these cases one important point is to be remembered—that whatever is to be done should be carefully and clearly explained to the friends, who are particularly prone to misinterpret unsuccessful efforts in these cases, and who are most obstinate and unreasonable in sticking to their own opinion as to the cause of death.

As an example of this, I may mention a case of which I have known, in which the patient dying of cerebral hemorrhage shortly after a confinement, in which she was given chloroform while forceps were used, the anæsthetic has always been spoken of by the friends as the cause of death, and the reputation of its administrator made to suffer accordingly.

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A SUGGESTED TREATMENT FOR FUNCTIONAL APHONIA.[1]

BY

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THE treatment of functional aphonia has always struck me as being unsatisfactory.

In the majority of cases, of course, the voice can, so to speak, be frightened back. The introduction of a mysterious instrument, as the laryngoscopic mirror must appear to the uneducated mind, in many cases serves the purpose. In other cases the more severe treatment by the interrupted current effects a cure, but a small minority of patients fail to benefit by any of the usual methods, and often pass into a state of voicelessness which persists for years, and often for life.

Now the frightening of the voice back always seems to me on a par with frightening children into good behaviour; it is uncertain in its effect, and relapse is common. It is only systematic treatment on definite lines which can be depended upon for any permanent effect, either in the case of a naughty child or the ill-behaving vocal cords; and I venture to think that the treatment I now advocate is based upon sound principles, and can be successfully carried out by any medical man.

I have adopted it myself with success for the last four or five years, and so far as I can ascertain it is a method which has not hitherto been described for the cure of functional aphonia. Should I, however, be mistaken in my assumption, I must apologise for having inadvertently trespassed upon someone's preserves.

Before illustrating by specific cases, I would premise by saying that the treatment is based upon the fact that in almost every case there is some sort of a sound which can be produced by the approxi-

[1] Read at a Meeting of the Bristol Medico-Chirurgical Society at Weston-super-Mare, on June 12th, 1907.

mation of the vocal cords, and this note has, so to speak, to be caught and educated. As a rule, it is a very high-pitched note—C or D above—of the very feeblest quality, often not louder than a mouse's squeak, and inaudible at a few feet away. It requires great patience on the part of the doctor to catch and educate it.

In most cases the sound is more easily made with mouth almost or quite shut. As the voice strengthens, the patients can gradually open the mouth more and more, but any attempt to make them start with a big, round mouth—as a singing master would advise his pupils to do—is useless, and they themselves, as a rule, choose to keep the lips fairly close together. Although the first sound produced is usually very high-pitched, in one patient the only sound I could elicit was a low-pitched grunt—about F below middle C ; this is unusual, I believe. It is very desirable to ascertain on the piano the note the patient first pitches on, either as a squeak or as a grunt, and to record this note in a book, so as to start on the same note the next lesson.

Sometimes it is not easy to make out what note a grunt is, but you can get pretty close to it, and after a few trials the patient will attune her voice to the note you have decided on as being nearest to her first attempt. It is well to remember that it is easier to " hum " than it is to pronounce a definite vowel sound, as " o " or " e." At the first interview you strike middle C on the piano, telling the patient to try to sing or " hum " to it. You then strike D, E, F, G, A, B, C in quick succession. As a rule, with the lower notes no sound beyond a gasp or whisper is heard, but when upper B or C is reached the patient usually gives a momentary faint squeak, which, if prolonged, relapses at once into a whisper. At the first interview you must be contented with this momentary feeble squeak. On the following day start at once on the note the patient succeeded in producing the day before—say C above—at first, as yesterday, being satisfied with a succession of short, sharp, falsetto sounds, with intervals of rest between. After practising the interrupted sounds for a few minutes, it is well to hold the note on the piano down for a brief space, telling the patient to continue to squeak as long as it is held down. At first the sound is very tremulous, but by the end of the lesson, which

lasts about ten minutes, it has usually become firmer, somewhat like a miniature siren. If it does not become firm, go back for a time to the interrupted squeaks. When the voice has thoroughly grasped the siren or humming sound, and can sustain it without breaking for a few seconds at a time, the vowel sound "o" should be attempted, and as soon as that has been accomplished a word, *e.g.* Do of the Do, Re, Mi should be learnt and sung on the same note. When the "Do" is first attempted it often results in failure, the voice breaking into a whisper again. Should that be the case, let the patient pronounce it as two words, De (short) O; she will then whisper the first part, De, and sing the O, and after a few trials will arrive at Do as one word. By this time she will, as a rule, be able to take a lower note and a higher one, and to sing the words Do, Re, Mi up and down on these three notes till they are sung firmly and fairly loudly. If there is any difficulty let her repeat the Do up and down, and soon the words Re and Mi are learnt, as the voice strengthens and she gains confidence. If the patient has anything of a voice the scale can soon be managed, and after that, or before, if the patient is not a singer, words can be intoned, and in reply to your questions the answers must be intoned, so that the patient gradually learns to use a large number of different words. After that she can try a simple song, as "Three Blind Mice," repeating the same sentence several times running, and then pass on to intoning on a few notes any piece of reading you choose. When she can sing or intone easily anything you give her, it is time to start speaking, and after practising the singing voice for a few minutes tell her to read instead of singing, starting with a simple sentence and repeating it very slowly after you. If there is any hesitation, let her at once go back to the singing, and try again. It may require two or three attempts. After that she can practise reading aloud regularly at home, but should always keep the voice in working order by daily singing.

This is an outline of the treatment, which can be modified as occasion demands. It is very desirable while you are carrying out this treatment in a severe case to isolate the patient, particularly if she happens to be living in the bosom of a large and

sympathetic family. If possible, let her stay with a nurse or any sensible woman who will carry out your instructions conscientiously. Strict orders should be given that she must not whisper at all, but after she has learnt to intone permission may be given to use her voice in conversation by intoning.

After the first two or three lessons, when she can sing Do, Re, Mi, it is a good plan for her to practise these first three notes twice or thrice a day for ten minutes at a time at the piano, her companion striking the notes and insisting on their being sounded firmly and steadily.

In the most severe case I had it took ten or eleven days before she could speak at all vigorously. In mild cases two or three visits may often suffice to restore the voice.

I will now illustrate by two cases, which I have taken as bad ones.

Case 1.—A French lady, a teacher, about 23 years of age, came to me on April 30th, 1902. She had lost her voice sixteen months ago, and had been treated at a throat hospital in town by electricity, &c. She had naturally a very weak voice, and had never sung. The only note she could produce was a high squeak on C above middle C, and B next below not so well. Both these notes were of the feeblest quality, barely audible a few feet away. On attempting notes above or below B or C the voice at once became a whisper. Three or four days later she succeeded in producing upper B, C, D fairly strongly, and also A and G very tremulously. I bade her practise these five notes—G, A, B, C, D—thrice daily, and enjoined on her the necessity of not trying to speak at all, but of asking for what she wanted in a sing-song on upper C. Three days after that she sang fairly clearly from G up to D, and at the same lesson spoke in a feeble voice. From that date she improved rapidly.

Case 2.—A young lady, age 19 years, came to see me June 18th 1904. She had lost her voice six months ago. She was very strong physically, and clever. Had had treatment, including electric battery, without benefit. Could only speak in a whisper. At the first interview the only sound I could elicit, after over a quarter of an hour's trial, was a very feeble, low-pitched grunt, about F below middle C, barely audible. No note in the nature of a high-pitched falsetto note could be produced at this visit. Three days later, on again making the grunt, the voice broke on to a momentary falsetto squeak, just audible, on E above upper C. On the following day she started at once on E above, and soon

produced all the notes by humming from upper C down to middle C, but broke down at once into a whisper when told to sing Do. By pronouncing the Do as two words—De—O—she soon succeeded in singing it as one word. The next day she sang the octave, and in answer to various simple questions intoned the replies. On June 26th, eight days after her first visit, after singing the octave and various sentences clearly for a short time, she succeeded, with some difficulty, in speaking a simple sentence, repeating the words after me very slowly. From this time the voice got rapidly stronger, and I advised her to practise singing every day to keep the voice strong.

These two cases I have chosen as they had both been treated by experts in throats, and the battery had been applied in both cases without success.

A CASE OF FILARIASIS: REMOVAL OF LYMPHATIC VARIX BY OPERATION.

BY

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AND

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IN October, 1906, a negro, aged 19, was admitted to the Royal Infirmary under Dr. Nixon on account of elephantiasis. His home had been in Demerara, where his parents, two brothers and four sisters are still living and healthy; one brother has died from "diarrhœa." Previous to leaving Demerara he had suffered from occasional attacks of fever, but during the last five years these had been absent. He came to England two-and-a-half years ago, and has followed many occupations—ship's steward, professional boxer, and motor-car cleaner. About six months after his arrival two abscesses appeared on his right leg; they burst and healed spontaneously without further trouble.

About seven months before he came under our observation, a swelling in the left groin began to trouble him—not by pain, merely by the discomfort of its presence; its growth was slow but steady. A month after the swelling appeared in the groin he noticed that the left leg as a whole was increasing in size quite

painlessly ; he was also struck by the fact that both the general fulness of the leg and the localised tumour in the groin increased on standing and decreased after resting. On one occasion he intentionally pricked the leg with a needle, and a milky fluid escaped, but the puncture healed in a few days.

On admission the patient presented all the appearances of vigorous health and considerable physical development. The heart and lungs showed nothing abnormal. The pulse rate was 88, respirations 24, and the temperature was 97° F. His abdomen was soft, flaccid, and not distended ; the liver and spleen were not enlarged. In the left groin, filling Scarpa's triangle and apparently outlined by it, was an elastic, irregularly-lobulated swelling neither painful nor tender ; above it was very definitely limited by Poupart's ligament. At first sight, and to the touch, it represented a soft lipoma, but there was a marked impulse on coughing. It had an ill-defined feeling of fluctuation, and by pressure on one half could be almost completely made to disappear in the part under compression, with a corresponding increase of fulness in the other part ; it felt, in fact, like a wet sponge in an india-rubber bag. When the patient lay down for a short while the tumour became obviously smaller, and then irregular knotted cords could be felt traversing its substance ; firm pressure on the abdomen just above Poupart's ligament conveyed the impression of a similar fulness in the pelvis on that side, which was absent on the right ; no enlarged glands could be made out. The thigh was not much increased in size, but below the knee there was considerable œdema, with the characteristic hardness and ruggedness of the skin which is associated with elephantiasis. At the middle of the calf the girth of the left leg was four inches greater than the right ; the skin was not broken or inflamed. There was no sign of lymph scrotum, or of any varicosity of lymphatics in other regions.

On the night subsequent to that of his admission the patient had a rigor, and his temperature rose to 102° ; the attack was by no means a complete or definite " ague-fit," and never recurred at any time. The temperature remained constantly normal afterwards.

Mr. Rudge, our house physician, examined the blood, and found the filaria sanguinis hominis present at nights ; the results of his investigations are appended to this report in their entirety. The swelling in the groin was explored shortly after admission with a hypodermic syringe ; no fluid entered the syringe, but on withdrawing the needle, a drop of milky fluid appeared at the seat of puncture ; by pressure a considerable amount of chylous fluid was procured, but on examination no filariæ were found (the time of puncturing was 3 p.m.). Rest in bed and the application of pressure made no material difference to the condition of the leg.

It was then represented to the patient that an operation for the removal of the tumour might be successfully undertaken, but that the cure of his elephantiasis or the discovery of the parent worm or worms (in whose life history he took a keen interest) were improbable, the chylous nature of the fluid making it unlikely that the actual point of obstruction was low enough down to be accessible. Understanding the circumstances, he decided that he would have the operation performed after Christmas, and returned home for a month.

On January 16th, 1907, Mr. Bush operated for the removal of the lymphatic varix. Turning up a large triangular flap of skin in the groin, he exposed the mass, ligatured the larger lymphatics above and below as they entered the varicose plexus, divided the internal saphena vein which was buried in the mass, and then cut through its remaining attachments, excepting an extension of the plexus which was found to pass through the saphenous opening, communicating probably with similarly dilated lymphatics more deeply situated. This was ligatured and divided, the varix when removed being about large enough to fill a soup plate (the lymph contained in its spaces having for the most part escaped); no trace of the parent worm was found in it.

So far as was possible all oozing points in the area laid open were ligatured before closing the wound, and a drainage tube was inserted. No attempt was made to follow the lymphatics into the pelvis and remove them from that situation, into which they obviously extended.

The patient made an uneventful recovery, and left the Infirmary a month after the operation; the wound was not completely healed, and there was still a slight leaking of lymph. The general swelling of the leg was somewhat less, and the patient expressed himself as much more comfortable since the lump in his groin had been removed. As he no longer resides in Bristol, we are not aware whether the discharge of lymph has stopped and the wound healed.

The appearance of the filaria in the blood was in no way affected by the operation; the embryos were found at the usual time during the night in undiminished numbers from the date of operation to the time of discharge.

Since the publication of Cunningham's monograph (with its extensive bibliography)[1] it seems of great importance that cases of filariasis which are submitted to surgical treatment should be reported in full, so that evidence may be amassed upon which sound conclusions may ultimately be based. For at present, if surgery fails to relieve the subjects of filariasis, they lie indeed under no obligation to "internal medicine."

[1] *Ann. Surg.*, 1906, xliv. 481.

BLOOD REPORT BY F. H. RUDGE, M.R.C.S., L.R.C.P.

The examination of the blood of this patient has not demonstrated any new facts as to the characteristics or life-history of the filaria nocturna embryo. The presence or absence of the embryo in the peripheral blood taken at various times during the day and night is indicated in the appended table:

12 midnight	numerous.	12 noon ..	none.
2 a.m. ..	present.	4 p.m. ..	none.
4 a.m. ..	present.	6 p.m. ..	none.
5 a.m. ..	present.	7 p.m. ..	none.
6 a.m. ..	few.	8 p.m. ..	present.
7 a.m. ..	none.	9 p.m. ..	present.
9 a.m. ..	none.	10 p.m. ..	numerous.
11 a.m. ..	none.	11 p.m. ..	numerous.

The advent of the embryos appears to be very rapid, as indicated by the fact that while at 7.30 p.m. none could be found, at 8 p.m. they were fairly numerous. Their disappearance was equally abrupt. The number, which average about twelve in a drop of blood equal to two minims, was greatest between the hours of 10 p.m. and 2 a.m. On one occasion a solitary embryo was found at 10.30 a.m. It was in every respect similar to those found during the night, except that it was not so active. This was after the lymphatic mass in the groin had been removed by operation. This was the only occasion when the worm was found during the day, and may be regarded as purely accidental.

It is unusual to find two or more in close proximity; in fact, they appear to be particularly prone to remain aloof from each other. Cold soon kills them, and their habit of leaving their sheaths under its influence was frequently demonstrated. If kept at body temperature, they would remain alive even under a cover-slip for forty-eight hours. An attempt to stain them *in situ* was made by giving the patient methylene blue pills, but although this was continued for a week, it was of no avail. The nuclei of the leucocytes were stained lightly. Empty sheaths were frequently found, and were noticed to be more numerous when the live embryo was not present.

The result of the blood-counts was as follows :—

	12 *noon.*	12 *midnight.*
Red	8,552,000	6,720,000
White ..	10,600	12,200
	PER CENT.	PER CENT.
Polymorphonuclear ..	59.8	53.24
Large mononuclear ..	14.6	12.23
Small mononuclear ..	9.4	17.02
Eosinophiles	12.8	13.29
Basophiles	2.5	4.35

This result only bears out what has already been described, namely the presence of eosinophilia. It seems questionable whether the increase in the eosinophilia when the worm was present, though constant, is a point from which one can draw any inference. If it were more marked, one might reasonably assume that the eosinophiles had a phagocytic action on the embryos. The counts were made frequently, but the above results are representative.

A microscopical examination of the chylous fluid obtained by aspiration of the mass in the groin demonstrated that the filaria was absent.

THE MEDICAL READING SOCIETY, BRISTOL.

BY

L. M. GRIFFITHS, M.R.C.S. Eng., L.R.C.P. Ed.

RARELY will it be possible to chronicle the doings for a hundred years of a society that has never at any time had a larger membership than twelve. But as the opportunity has recently occurred in this city, such an event should not be passed over without some comment, as the history of a Medical Society during such a long period cannot fail to bring out many interesting points.

On March 28th, 1807, some medical men of Bristol decided to form "The Medical Reading Society, for the purpose of promoting medical knowledge and a friendly intercourse among its members, and for purchasing medical books." Some practical rules, very similar to those of most book or magazine clubs, received the approval of these eleven members :—[1]

THOMAS JERMYN, Surgeon and Apothecary, 17 Queen Square.

HENRY DANIEL, Surgeon, 52 Queen Square.

RICHARD EDGELL, Surgeon, 68 College Street.

BENJAMIN SPENCER, Surgeon and Apothecary, Paul Street, Kingsdown.

WILLIAM MORTIMER.

ROBERT LAX.

BENJAMIN GUSTAVUS BURROUGHS, Apothecary, Portland Place, Clifton.

JOSEPH MAURICE, Apothecary and Man-Midwife, Upper Maudlin Lane.

WILLIAM HETLING, Surgeon, 18 Orchard Street.

NATHANIEL SMITH, Surgeon, 34 College Green.

JOHN BISHOP ESTLIN.

[1] The names are given in the order in which the signatures to the rules occur. The descriptions and addresses are from Mathews's *Bristol Directory* for 1807. In this the names of Mortimer and Lax are not given, but in the 1808 *Directory* Lax appears as "Surgeon & Apothecary, 11 Queen Square," and in that for 1809 there is an entry of "Berjew and Mortimer, Surgeons & Apothecaries, 17 Bridge Street." The name of Estlin, who was the son of the Rev. John Prior Estlin, Unitarian minister and master of a successful school at St. Michael's Hill, is not in the professional list of the 1807 *Directory*, but appears in that for 1809, when his residence is given as 2 Unity Street. Burroughs seems also to have had a branch establishment, for there is an entry in 1807 of "Yeo and Burroughs, *Apothecaries*, Granby House, Hotwells, and Portland Place, Clifton." Jermyn was one of the Surgeons at St. Peter's Hospital; Spencer and Smith were two of the three "Extra Men-Midwifes" of the Dispensary.

On May 15th, 1807, Bowles, one of the surgeons at the Infirmary, died. On the following morning the *Bristol Mirror* contained the applications of ten surgeons for the vacancy, amongst whom were Jermyn, Daniel, Edgell, Lax, Hetling, and Smith. Apparently only three of the ten persisted in their candidature, and Hetling was elected with 395 votes, Lowe coming second with 167, and Smith third with 74. Another vacancy occurred shortly after, and Lowe was elected in July; Daniel, Smith, and Edgell were among the unsuccessful candidates.

The members were to meet at one another's houses once a month[1] at half-past six o'clock. When the names were called over at seven, anyone then absent was to be fined one shilling. The fine for retaining a book longer than the time allowed was fixed at threepence each day. At the end of the year the books out of circulation were to be sold by auction, and any work not realising more than half its cost was to be taken at that price by the member who proposed it. It was considered necessary to insert in the rules that no druggist should be admitted into the Society, and it was laid down that no one should be elected a member except by a unanimous vote. One rule stated that "Each member shall keep an account of the books received by him and to whom forwarded, which account shall be regularly sent to the monthly meetings at or before seven o'clock." Omission to do this involved a penalty, apparently five shillings and half a crown at different times. The book in which the member was supposed to keep this record was afterwards known as "his green register," and notes about it frequently occur in the minutes and rules.[2]

The table which accompanies these notes gives the names of all the members[3] during the hundred years, together with the dates when they became, and when they ceased to be, members, and also shows the constitution of the Society at each change of membership. As the minute-book from April 21st, 1813, to January 20th, 1823, is missing,[4] there is some uncertainty about

[1] The day has varied from time to time.

[2] From the beginning of the Society a ledger was to be kept by the secretary for the entry of all books received, and by whom proposed and to whom and when they were sent. With the exception of a few years these entries are in existence.

[3] In a later number of the *Journal* it may be possible to give some biographical notes concerning these, and the Editor will be glad to receive anything of interest in connection with them. It will be fairly easy to obtain information about some of those who were fortunate enough to die before the issue of the *Dictionary of National Biography*, but about many it will be a matter of great difficulty to present anything like a connected account.

[4] It is impossible to say when the volume disappeared. It was not available in 1886, when the list of members was drawn up for the purpose of getting portraits of past members.

the dates of that period, and these are printed in *italic*. They may be taken as approximately correct, as the cash-book from 1817 and some of the fine-lists and sale-lists from 1818 to 1823 are in existence.[1] It will be noticed that only on rare occasions have the members been less than their full number for more than a short period. The Society has been so attractive, that men have often had to wait a long time for admission. There was no vacancy between 1894 and 1906.

The minute-books do not record much more than the election and absence of members and the names of the books proposed. It has been the custom for a long time for the secretary for the year to close his term of office by giving at the January meeting a dinner to the members. When this was introduced does not appear in the minutes.

It would naturally be expected that a society of enthusiasts such as those forming the Medical Reading Society would procure the most recent literature concerning any new development connected with the healing art. On January 20th, 1808, Willan's book on *Vaccine Inoculation*, published in 1806, was ordered.

It was not till February, 1808, that a twelfth member was proposed. Then Barton[2] was nominated, but at the following meeting his name was withdrawn, in consequence of a prior application made by Jermyn on behalf of Sheppard,[3] who, however, was not elected, because at the April meeting, after he had been twice balloted for, he did not receive a unanimous vote. At the June meeting, therefore, Barton was again brought forward, but met with the same fate as Sheppard after the vote had been twice taken. At the August meeting an acceptable member was found, when J. C. Swayne[4] was elected. From November till this date the Society had practically only ten members, as leave of absence had been granted to Estlin, who had gone to Edinburgh, and was away till this meeting.

Further interest in the vaccination question was apparent in

[1] The cash-accounts are almost complete, but maay of the fine-lists and sale-lists are wanting.

[2] "Charles Barton, Surgeon & Apothecary, 3 Hope Square."

[3] "Godwyn and Sheppard, Surgeons, Redcliff Hill."

[4] "John C. Swayne, Surgeon, &c., 15 Cumberland Street."

1809. At the June meeting Thomas Brown's *Inquiry into the Anti-variolous Power of Vaccination* (throwing doubts on its efficacy) was ordered, and in the following month the Society unanimously agreed to have (1) *The Report on Cow-pock Inoculation from the Practice of the Vaccine-Pock Institution*, by Pearson, Nihell, and Nelson, and any other statement by that Society; (2) *The Address of the Royal Jennerian Society*, instituted 1803; and (3) *A Statement of Evidence from Trials by Inoculation of Variolous and Vaccine Matter by the Physicians of the original Vaccine-Pock Institution, Established Dec.*, 1799,[1] printed in 1804. In January, 1810, the second edition of Bryce on the cow-pock was ordered.[2]

For facilitating the work of the member who had at the end of the year to compute the fines, an entry was always made of the absence of the "green register." At the meeting at Maurice's on May 26th, 1810, Estlin appealed against the fine being levied in his case, as "his book was on the table from seven to eight o'clock, and was then removed to another room in the house."

At this period, and for some time afterwards, it was the custom for the names of both present and absent members to be entered in the minute-book. For the benefit of the future historian of the Society, it is much to be wished that this practice should be restored, as it enables one to see at a glance the composition of the Society at any date. On December 21st, 1810, the cause of Jermyn's absence is stated to be "ill health," and on January 18th, 1811, both he and Spencer are among the absentees. There is no entry about the withdrawal of either of them, but as their names do not appear again, it may be taken for granted that this is about the date of their resignation. Crang[3] was elected in February and Baker[4] in March.

By rule of the Society, each original member paid a subscription of one guinea, and future members were in addition to pay an entrance fee of one guinea. Although there is no record

[1] The *Index-Catalogue*, vol. xv., 1894, p. 523, has 1779 by mistake.

[2] Some notes on the important books ordered by the Society during the hundred years would be of interest if space permitted.

[3] "Crang, James, Surgeon, &c., 17 Queen Square."

[4] "Baker, Robert, Apothecary, 3 St. James's Square."

of it in the minute-book, it would appear that at the beginning of 1811 the entrance fee was raised to two guineas, for in the accounts for that year the contributions of Crang and Baker are entered at three guineas each. At the annual meeting on January 17th, 1812, it was resolved "that the funds of the Society, after the payment of last year's accounts, should be equally divided amongst the respective members." This resulted in the payment of £4 5s. 11½d. to each member except Daniel, who, probably in correction of some error in his previous account, received £4 13s. 11½d. Daniel, who was the proposer of this distribution of the funds, resigned his membership in March, when Edgell also withdrew. At the next meeting Smith and Lax left the Society. It looks as if there was some rift in the lute, for then only five of the original members were left, and when, at the meeting in May, Crang withdrew, there had been five resignations in two months. At this May meeting a Committee, which had been appointed in the previous month, should have reported concerning the claims of the Society upon those gentlemen who had withdrawn, but there is no record in the minutes of their report, which no doubt was presented, as in the following December a special note was sent to Crang, who had refused to pay his fines.

The Society was evidently anxious at this time to have as members only those who would give it strength, for in May, when there were five vacancies, the name of William Maurice was withdrawn on account of his absence from the country. But Stock[1] and Prichard[2] were then elected, and at the June meeting Sheppard, who had failed at the ballot in April, 1808, was received into the Society; but although there were two vacancies, the Society would not have either Porter,[3] who had been proposed in May, or Perry,[4] who was balloted for in July; and the same fate awaited the younger Gold[5] on January 15th, 1813, on which

[1] "Dr. J. E. Stock, 6 Park Street."

[2] "Dr. J. C. Prichard, Berkeley Square."

[3] Dr. W. Ogilvie Porter, 29 Portland Square, brother of Jane Porter who wrote *The Scottish Chiefs*.

[4] "Perry, Chas. James, Surgeon and Apothecary, 13 North Street."

[5] "Gold, Francis, Junr., Apothecary, 7 College Green."

date the resolution appears affirming the entrance-fee for new members at two guineas, although Prichard, Stock, and Sheppard were to be asked to pay only one guinea each.[1]

When the membership was only ten, the first minute-book closes with the meeting of April 21st, 1813. After this date reference should be made to the tabulated list for the dates of the election and departure of each member.

Whether any members were elected and withdrew during the ensuing four years it is impossible to say, for the next extant record of the Society is the statement of accounts for 1817, presented at the annual meeting on January 20th, 1818. In this are the names of William Swayne and Gold. The annual subscription was then half a guinea.

The sale-list of January, 1818, affords the information that the Society did not limit itself to medical literature, for it contains *The Quarterly Review*, *The Edinburgh Review*, and *The British Review*.

Between this date and March, 1823, when it was discontinued, the newspaper called *The Literary Gazette* had been ordered, and also the *Westminster Gazette*, for which a member held himself responsible.

When the rules were revised in 1820, the meetings were held on the third Saturday in every month from half-past six[2] till eight o'clock; the entrance fee was confirmed at two guineas, and the subscription was to be the amount necessary to defray the expenses.

Till 1823 it was a rule that the meetings should be held in the city; but on April 17th, when Hetling proposed to receive the Society either at his own house or at Reeves's Hotel,[3] it was resolved that the meeting should be at his house, 24 Royal York Crescent, to which he had just moved from 18 Orchard Street; and it was further resolved that as Goodeve was a resident in Clifton, living at 22 Mall, he should not be expected to receive the Society in Bristol. The distinction between Bristol and

[1] When Prichard rejoined the Society in 1832, he paid the entrance-fee of two guineas.

[2] Altered before 1823 to seven o'clock.

[3] Now the Turkish Baths.

Clifton seems to have been up to this time rigidly maintained, and it was not till the Reform Act came into force in 1832 that Clifton was added to the parliamentary borough. In 1835 it was included in the municipal area.

In December, 1823, the *Lancet*, the first number of which was dated Sunday, October 5th, 1823, was ordered from the commencement, but in the following February "it was resolved that the *Lancet* is a publication unfit for this Society, and that it be discontinued."

The fine for non-attendance, after having been increased at some date not discoverable to two shillings for absence during the whole meeting, was reduced to one shilling in January, 1825; and in the following June the Society re-considered its action in reference to the *Lancet*, and ordered it in half-bound volumes, giving the impression that thus the members would receive less contamination than by touching the unclean thing in weekly numbers. In September Howell,[1] Wilson,[2] and Nathaniel Smith[3] "were balloted for as members, and not received."

The two shilling fine for non-attendance at eight o'clock was restored in January, 1826, when the Society determined to take the *Lancet* again in numbers, and also to be responsible for the *Westminster Review*.

The dissatisfaction of the Society with the *Lancet* was again in evidence in August, 1828, when a proposition was carried that "This Society, considering the *Lancet* as a publication injurious to the respectability and best interests of the profession and disgraceful to the medical men who conduct it, resolves that its circulation in the Society be henceforth discontinued."

In 1829 it was decided to give up the *Quarterly*, *Edinburgh*, and *Westminster Reviews*.

At the annual meeting in January, 1831, the hour of meeting was altered to eight instead of seven, and in 1834 the day was

[1] Dr. John Howell, living at 45 Royal York Crescent, was one of the physicians at the Clifton Dispensary, then at 1 Dowry Square.

[2] Wilson's name first appears in the *Directory* for 1826 in partnership with Mortimer at 17 Bridge Street.

[3] He had retired in 1812, and was evidently seeking re-election.

changed to the first Wednesday of each month, and it has remained so till the present time.

At this time it was resolved to take again the *Literary Gazette*, which the Society had been without since March, 1823.

An attempt to reintroduce the *Lancet* failed in January, 1835, but was successful at the next annual meeting in 1836, when it was also decided to subscribe for the *British and Foreign Quarterly Review*.

A rule that no accumulated fines on a book should exceed one half of its prime cost was carried in January, 1837, and in the following year it was decided to abolish the second fine of one shilling imposed on absentees from the meetings, but at the next annual meeting it was again restored.

It was unanimously resolved on January 8th, 1840, to discontinue the "Green Register."[1] At the next annual meeting the Society ordered the *Provincial Medical and Surgical Journal*,[2] but resolved again to give up the *Literary Gazette*.

Nothing of importance is recorded in the minutes from this time till January, 1846, when the following propositions were carried unanimously: (1) That Sunday be a "*dies non*;" (2) That the days of transfer be Monday and Thursday, and that the period of detaining a book be always three days or a multiple of three days; (3) That the Green Register be restored.[3] It was also determined once more to give up the *Lancet*.

In January, 1847, it was resolved "that Mr. Coates [who had resigned in 1837] be allowed to read the books when out of circulation upon the payment of one guinea per annum."

In January, 1848, the *Lancet* seems to have been again taken on the condition of one member being responsible for it. At the April meeting we can imagine that a lively discussion took place,

[1] See p. 224.

[2] The precursor of the *British Medical Journal*.

[3] Among the Society's books are Morgan's register from 1846 to the time he left the Society, in 1872; George Hetling's from January, 1846, to December, 1847, and in the same volume William Cross's from January, 1848, to January, 1870; Estlin's from May, 1846, to December, 1854, together with that of Hore, who succeeded him, from May, 1855, to December, 1870; Brittan's from May, 1865, to November, 1873.

for it is recorded that three gentlemen, "tho' 3 minutes after time by the institution clock, pleaded being in time by their watches, and it was determined by 5 to 4 that they should not be fined."

In the minutes of February, 1849, there is a vague record concerning "Nathaniel Smith, who was proposed and seconded," but there is no note of his rejection, and he was certainly not elected. As he had failed at the ballot in 1825, this was his second unsuccessful attempt to re-enter the Society, from which he had withdrawn in 1812. The vacancy for which he was nominated was not filled till March, 1850.

In 1854 the Society again took the responsibility of the *Lancet*, as the member who had proposed it in 1848 declined any longer to have it at half-price, but as a member was willing upon that condition to take the *Quarterly Review* and the *Edinburgh Review*, they were again circulated in the Society.

The *Lancet*, however, remained in favour with the Society but a short time, for in April, 1854, it was resolved "That in the opinion of the members of this Society the conduct of the *Lancet* of late (more especially with reference to the proceedings in the case of Mr. Gay at the Royal Free Hospital) has not been such as becomes the Journal claiming to be the organ of an enlightened and honorable profession—and therefore, that it be discontinued." The circumstances were connected with the dismissal of the well-known surgeon, John Gay, from the Hospital in December, 1853. This caused much indignation among many members of the profession, and a meeting[1]—at which it was suggested that Thomas Henry Wakley, son of the editor of the *Lancet*, and who was one of the surgeons at the Hospital, had had something to do with it—was held on January 18th, 1854, to protest against the action of the committee of the Hospital. The pages of the *Lancet* for the first half of 1854 are amply provided with very strong language on this subject.

[1] The secretary of the organisation of this meeting was Harvey Ludlow, brother of Ebenezer Ludlow, successively Resident Medical Officer and first Assistant-Physician at the Bristol Royal Infirmary. The Royal Medical and Chirurgical Society, at its meeting on March 1st, 1854, also decided to withdraw the *Lancet* from its list.

On January 10th, 1855, there is a note that "Mr. Swete[1] was unanimously elected an honorary member as successor to Mr. Coates."[2] No reason is stated for the choice of Mr. Swete, who had never been in the Society. There is nothing in the revised rules of 1820 or in the 1877 edition about honorary members; but a resolution may have been passed between 1820 and 1823 in reference to them, and this may have been in evidence at the time, although the minute-book for that period has been lost. Coates had resigned in 1837 after a membership of less than five years, and there is no record why the special privilege had been conferred upon him. At this January, 1855, meeting Estlin, who had been in the Society more than forty-seven years, resigned, and he was very properly made an honorary member.[3] Upon this occasion the sins of the *Lancet* had been partly condoned, and only eight months after the emphatic resolution condemning it, it was again ordered for the Society, but only on the undertaking of a member to purchase it at the sale at half-price.

At the October meeting in 1855, the Society, having to choose between William Budd and Sawer, elected the former.

The annual meeting in January, 1856, decided that the Society should take the *Lancet*.

A proposal that the Society should no longer circulate the *Quarterly Review* and the *Edinburgh Review* failed in January, 1857, to find a seconder; and at the next annual meeting the *Athenæum* was added to the list on the same terms as the *Reviews* were taken in 1854, but it remained only for twelve months. The same member who had proposed the discontinuance of the *Reviews* failed again in 1857 to secure it. In March it was resolved

[1 "E. H. Swete, surgeon, 1 Dowry Parade," the author of *Flora Bristoliensis*, 1854, on the title-page of which he is described as "Lecturer on Botany at the Bristol Medical School." A search through the minute-books of the School has failed to discover any entry made about him.]

2 The title of honorary member was a misnomer, as Coates was required to pay an annual subscription (see p. 230). The resolution of January, 1847, gave him no distinctive title. Mr. Swete paid a guinea a year for two years.

3 Smerdon, who had been "acting secretary" for thirty years, was made an honorary member upon his resignation on account of illness in 1870. Crosby Leonard was elected an honorary member in July, 1879, after a membership of nearly twenty years, but he lived to enjoy the honour only a few months.

" that Mr. Goodeve be an associate of the Society," on the understanding that he " should be liable for an annual subscription, but not for fines ; " but the minutes afford no information as to the reason of this step, which was no doubt taken on account of his long membership.[1] Probably the connection by associateship, for which there seems no provision in the rules, was a merely nominal one, although, as he was not to be fined, it would appear that he was to receive the books, perhaps after they had gone the round of the members.

The Society declined in January, 1860, to add *Bentley's Quarterly Review*[2] to the list, and in 1861 it decided to give up the *Quarterly Review* and *Edinburgh Review*, which, however, were restored in 1864.

A new departure is chronicled in July, 1864, when a sub-committee was appointed " to make arrangements for the excursion," and in June, 1865, two members were requested " to arrange for the annual expedition." A member of the Society at the time recollects going to Aust, where they dined and geologised, but no information is forthcoming in reference to the other outing, and probably there were only these two.

The desire for high-class periodical literature other than medical was frequently manifested, and in January, 1869, the *Revue des Deux Mondes* was ordered, but remained on the list only till January, 1870, when with the *Quarterly Review* and the *Edinburgh Review* it was discontinued.

Social changes made it desirable to alter the hour for meeting, and in January, 1871, it was decided to make this nine o'clock instead of eight, and at that hour it has since remained. And on December 4th, 1872, it was agreed that the annual meeting should be held in December instead of January, thus giving more opportunity for the transaction of business than on the evening of the dinner. In the revised rules, which were issued in 1877, the January meeting is called the annual meeting, but in November, 1878, the resolution of December 4th, 1872, was re-adopted.

In January, 1881, the rule referring to the fine-committee

[1] Goodeve had resigned in the previous August after having been a member for 38 years.

[2] This died after its second volume.

was elaborated with much detail, and in 1882 some minor alterations about the election of secretary were adopted.

In order to facilitate the ordering of books, it was agreed in 1883 to take in the *Bookseller*, a monthly trade-journal giving classified lists of new publications, and it was resolved that the secretary should produce it at each meeting; but this useful periodical seems to have been in favour for only one year.

In 1884 the Society decided to make an effort to procure the portraits of all past members. This has succeeded to some extent, and they are preserved in albums among the archives of the Society.[1]

Greig Smith, at his secretarial dinner in 1885, embellished the *menu* card with some lines of verse.[2]

In 1891 the Library of the Bristol Medico-Chirurgical Society was opened in the Literary and Philosophic Club, and was moved to the Medical Department of University College in 1893. The Reading Society, at its meeting in January, 1902, nobly gave all its periodicals to the library, but in 1904 they "were presented to those members wishing to have them."

At the meeting on March 7th, 1907, "it was unanimously

[1] The following have not yet been obtained, and the Society would be grateful for any help in securing them.

Jermyn	Gold	Stock	Mortimer
B. Spencer	J. Maurice	Bernard	Goodeve
Daniel	Gilby	W. Maurice	Hore
Edgell	Sheppard	Howell	Ring
Lax	Baker	King	

Arrangements would be made for photographing any portraits that may be lent for the purpose.

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[2] ESTO MIHI, ERO TIBI.

Twelve Medicos of high renown,
In this our ancient Western Town,
Harmoniously combine
To take in books for culture's sake,
Meet once a month for tea and cake,
And once a year to dine.
These twelve, of varied reputation,
Are competent to treat a nation
For, be your ailment what you please,
There 's one at least for your disease.
Of eyesight should you threaten loss,
The man to make you see is **Cross**;
And should your reason show a flaw,
The man to lock you up is **Shaw**;
And if you think you cannot hear,
Let **Harsant** peep into your ear.
From hidden holes your germs to ferret
There 's none so 'cute as **Markham Skerritt**:
His microscope will soon determine
How **Shingleton** will kill the vermin;
And livers weary of their life
Find comfort in the arms of **Fyffe.**
With **Griffiths** strong on vaccination
And apt Shakespearian quotation,
With **Lansdown** for our angiomas,
And **Dobson** for round-celled sarcomas,
We need not fear: but if more ill,
There 's **Beddoe** and there 's **Prichard** still.
Should these eleven fail to mend you,
Then **Greig Smith's** knife will gently end you.

1 See *Bristol M.-Chir. J.*, 1890, viii. 186–7.

2 See *Bristol M.-Chir. J.*, 1890, viii. 182–3; 1892, x. 268.
3 See *Bristol M.-Chir. J.*, 1890, viii. 187–8.
4 See *Dict. Nat. Biog.* and Augustin Prichard's *A Few Medical and Surgical Reminiscences*, 1896, pp. 10—14.
5 See *Bristol M.-Chir. J.*, 1892, x. 269—70, 289—90.
6 Resigned in 1825, but was re-elected in 1832. See *Dict. Nat. Biog.*; *Bristol M.-Chir. J.*, 1890, viii. 176–8; 1892, x. 265; Augustin Prichard's *A Few Medical and Surgical Reminiscences*, 1896, pp. 14—16, 25
7 See *Bristol M.-Chir. J.*, 1890, viii. 172–4.
8 See Latimer's *Annals of Bristol in the Eighteenth Century*, 1893, p. 524.
9 See *Bristol M.-Chir. J.*, 1890, viii. 169—70.

10 See Latimer's *Annals of Bristol in the Eighteenth Century*, 1893, p. 524.

11 See *Bristol M.-Chir. J.*, 1890, viii. 170.

12 See *Bristol M.-Chir. J.*, 1890, viii. 183–4; 1892, x. 272.
13 Became M.D. in 1839. See *Dict. Nat. Biog.* and Augustin Prichard's *A Few Medical and Surgical Reminiscences*, 1896, pp. 30–2.
14 See *Bristol M.-Chir. J.*, 1892, x. 272.
15 See his *Few Medical and Surgical Reminiscences*, 1896, and *Some Incidents in General Practice*, 1898; *Bristol M.-Chir. J.*, 1892, x. 272; 1898, xvi. 1—15.
16 Became M.D. soon after joining. See *Bristol M.-Chir. J.*, 1892, x. 272; 1903, xxi. 193—202.
17 Resigned in 1848, upon leaving England, but was re-admitted in 1850. The end of the secretarial work for 1848 was taken by Hetling. See *Bristol M.-Chir. J.*, 1892, x. 273.

18 See *Dict. Nat. Biog.*; *Bristol Royal Inf. Reports*, 1878—79, i. 361–7; *Bristol M.-Chir. J.*, 1892, x. 273.
19 See *Bristol M.-Chir. J.*, 1892, x. 272.
20 See *Bristol M.-Chir. J.*, 1892, x. 273; 1902, xx. 97—105.

21 See *Bristol Royal Inf. Reports*, 1878—79, i. 210—25, 342—60; *Bristol M.-Chir. J.*, 1892, x. 273.
22 See *Bristol M.-Chir. J.*, 1891, ix. 67—70; 1892, x. 273.
23 See *Bristol Royal Inf. Reports*, 1878—79, i. 226—31.

24 Became M.D. in 1872. See *Bristol M.-Chir. J.*, 1892, x. 287.

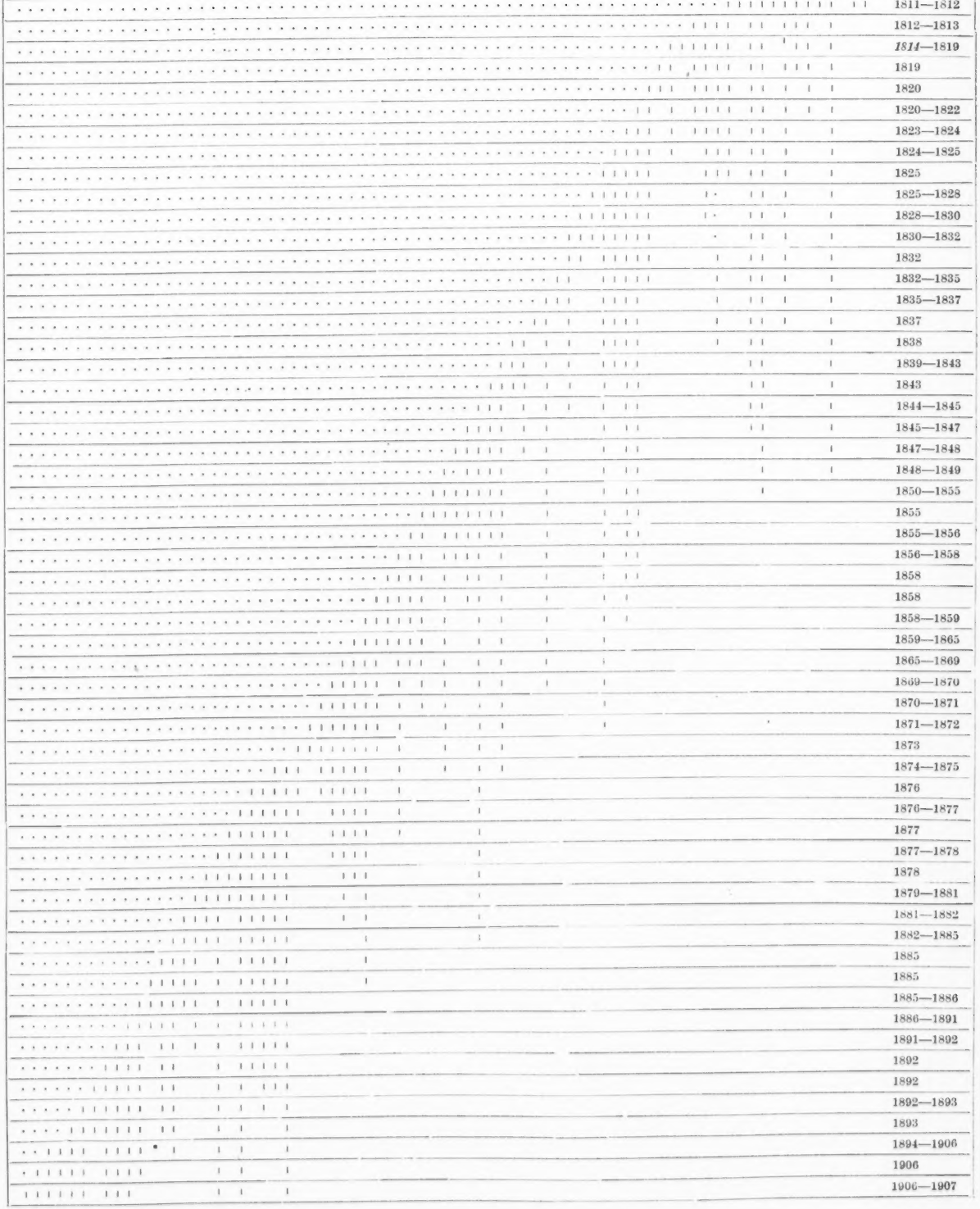
25 Died April 29th, 1907. See *Bristol M.-Chir. J.*, 1907, xxv. 97—108.

26 See *Bristol M.-Chir. J.*, 1901, xix. 97—100.

27 See *Bristol M.-Chir. J.*, 1897, xv. 105—21.

There is no information about the Secretaries for 1814, 1815, 1816, 1821, and 1822. I have assumed that the older members who had not been secretaries were so in turn, although the handwriting of the cash accounts for 1820–22 is evidently the same as that for 1819.

	Period of Membership.	Members and their Secretarial Years.	1807	1808—1811	1811—1812	1812—1813	*1814*—1819	1819
	1807—1811	Mr. THOMAS JERMYN .. .. (1807)						
1	1807—1812	Mr. HENRY DANIEL .. .. (1809)						
	1807—1812	Mr. RICHARD EDGELL .. .. (1811)						
	1807—1811	Mr. BENJAMIN SPENCER						
	1807—1849	Mr. WILLIAM MORTIMER .. .. .. (1818, 1835)						
	1807—1812	Mr. ROBERT LAX .. .. (1808)						
	1807—1822	Mr. BENJAMIN GUSTAVUS BURROUGHS .. (*1814*)						
	1807—1819	Mr. JOSEPH MAURICE .. .. (*1815*)						
2	1807—1837	Mr. WILLIAM HETLING .. .. ..(1812, 1817, 1832)						
3	1807—1812	Mr. NATHANIEL SMITH .. .. (1810)						
4	1807—1855	Mr. JOHN BISHOP ESTLIN .. .. .. (*1816*, 1838)						
5	1808—1847	Mr. JOHN CHAMPENY SWAYNE .. .. (1820, 1837)						
	1811—1812	Mr. JAMES CRANG						
	1811—1825	Mr. ROBERT BAKER .. .. (1813)						
6	1812—1839	Dr. JAMES COWLES PRICHARD .. .. (1819, 1833)						
7	1812—1830	Dr. JOHN EDMONDS STOCK .. .. (*1821*)						
	1812—1824	Mr. EDWARD W. SHEPPARD .. .. .. (*1822*)						
8	*1814*—1819	Mr. FRANCIS GOLD						
9	*1814*—1825	Mr. WILLIAM SWAYNE .. .. (1823)						
	1819—1820	Dr. WILLIAM GILBY						
	1820—1835	Mr. WILLIAM MAURICE .. .. (1824)						
10	1820—1858	Mr. WILLIAM JAMES GOODEVE .. (1825, 1842, 1850)						
	1823—1859	Mr. ISAAC LEONARD .. .. .. (1826, 1843, 1855)						
	1824—1843	Mr. JOHN KING .. .. (1827)						
11	1825—1872	Mr. WILLIAM FREDERICK MORGAN (1828, 1847, 1863)						
	1825—1832	Dr. CHARLES EDWARD BERNARD .. .. (1829)						
	1828—1832	Mr. JOHN GRANT WILSON .. .. (1830)						
	1830—1845	Mr. JOHN HARRISON .. .. (1831)						
	1832—1837	Mr. WILLIAM COATES .. .. (1834)						
	1835—1870	Mr. CHARLES SMERDON .. .. (1836, 1853, 1867)						
	1837—1837	Dr. JOHN HOWELL						
12	1838—1848	Mr. GEORGE HILHOUSE HETLING .. .. (1839)						
13	1838—1844	Mr. WILLIAM BENJAMIN CARPENTER .. (1840)						
	1839—1875	Dr. ALEXANDER FAIRBROTHER ..(1841, 1851, 1868)						
14	1844—1856	Mr. JOHN COLTHURST .. .. (1844)						
15	1844—1885	Mr. AUGUSTIN PRICHARD .. .. (1845, 1864)						
16	1845—1858	Mr. JOSEPH GRIFFITHS SWAYNE .. .. .. (1846)						
17	1847—1858	Mr. ROBERT WILLIAM COE .. .. .. (1848, 1852)						
	1848—1875	Mr. WILLIAM CROSS .. .. (1849, 1865)						
	1850—1855	Mr. EDWARD WALDO .. .. (1851)						
	1855—1871	Mr. HENRY AUGUSTUS HORE .. .. .. (1856, 1869)						
18	1855—1869	Dr. WILLIAM BUDD .. .. (1857)						
19	1856—1877	Mr. THOMAS GREEN .. .. (1858, 1873)						
	1858—1865	Dr. HENRY EDWARD FRIPP .. .. (1859)						
20	1858—1873	Dr. EDWARD LONG FOX .. .. (1860)						
	1858—1885	Dr. JOHN BEDDOE .. .. (1861)						
21	1859—1879	Mr. CROSBY LEONARD .. .. (1862)						
22	1865—1882	Dr. FREDERICK BRITTAN .. .. (1866)						
23	1869—1878	Mr. ROBERT WILLIAM TIBBITS .. .. .. (1870)						
	1870—1876	Mr. EDMUND COMER BOARD .. .. .. (1871)						
24	1871—1873	Mr. THOMAS EDWARD CLARK .. .. .. (1872)						
	1873—1877	Dr. WILLIAM HENRY SPENCER .. .. .. (1874)						
	1874—	Dr. ROBERT SHINGLETON SMITH .. (1875, 1890)						
	1874—1892	Mr. NELSON CONGREVE DOBSON .. .. (1876, 1891)						
	1876—1893	Mr. FRANCIS POOLE LANSDOWN .. .. .. (1877)						
	1876—1892	Mr. LEMUEL MATTHEWS GRIFFITHS .. .. (1878)						
25	1876—	Dr. EDWARD MARKHAM SKERRITT .. (1879, 1898)						
	1877—1881	Mr. CHARLES GORE RING .. .. (1880)						
	1877—	Dr. JOHN EDWARD SHAW .. .. .. (1881, 1899)						
26	1879—1885	Dr. WILLIAM JOHNSTONE FYFFE .. .. (1882)						
	1879—1892	Mr. FRANCIS RICHARDSON CROSS .. .. (1883)						
27	1881—1886	Mr. JAMES GREIG SMITH .. .. (1884)						
	1882—1906	Mr. WILLIAM HENRY HARSANT .. .. (1885, 1900)						
	1885—1893	Dr. ARTHUR BANCKS PROWSE .. .. .. (1886)						
	1885—1891	Mr. CHARLES FREDERICK PICKERING .. (1887)						
	1885—1906	Mr. ARTHUR WILLIAM PRICHARD .. (1888, 1901)						
	1886—	Dr. JOHN MICHELL CLARKE .. .. (1889, 1902)						
	1891—	Mr. JAMES PAUL BUSH .. .. (1892, 1903)						
	1892—	Mr. JOHN DACRE .. .. (1893, 1904)						
	1892—1893	Dr. PATRICK WATSON WILLIAMS						
	1892—	Dr. GEORGE PARKER .. .. (1894, 1905)						
	1893—	Dr. JAMES SWAIN .. .. (1895, 1906)						
	1894—	Dr. ROBERT GUTHRIE POOLE LANSDOWN (1896)						
	1894—	Dr. BERTRAM MITFORD HERON ROGERS .. (1897)						
	1906—	Mr. JAMES TAYLOR .. .. (1907)						
	1906—	Mr. GEORGE MUNRO SMITH						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carried that to celebrate the centenary of the Society, a dinner should be held on the day of meeting nearest to the date of inauguration of the Society," and that past members be invited as guests of the Society. In accordance with this resolution the twelve members of the Society and six former members dined together at the Clifton Club on April 3rd.[1]

Although the limited information afforded by the records has made it impossible to provide anything like an adequate history of the Society, it would be wrong to close this fragmentary account without giving a full meed of praise to it for the indirect benefit which it has conferred upon the local profession, whose indebtedness to it should be distinctly recognised. During the long period of a hundred years a small Society, numbering many scholarly and prominent men, has shown the necessity, in keeping abreast of the times, of having constantly before it the best literature obtainable; and its continuance is evidence that the needs of an enlightened profession are not entirely met by the provision of an excellent reference library, such as local medical practitioners have at their command, but that it is essential that there should be the means of consulting desirable books and periodicals at more leisure than is possible with a library which is not a lending one.

The Society, now so strongly representative of all that is best and highest in the profession, and with a century's good work as its voucher, could, by taking the initiative in the founding of a medical institute or club that would bring together practitioners in closer professional and social relationship, add to the usefulness which hitherto it has been able to achieve. Such an institution should elicit the practical sympathy and hearty co-operation of the local profession, members of which should see in it an opportunity for mutual help and encouragement in their difficulties and disappointments; and the Society would have the privilege of extending, in an ever-widening circle, the purpose of "promoting medical knowledge and friendly intercourse," which its originators set before themselves as their object, and which succeeding generations have so well and so honourably maintained.

[1] A photograph of the occasion is preserved in the minute-book.

Progress of the Medical Sciences.

MEDICINE.

For this summary of **the pathogenic streptococci** we are indebted to Dr. I. Walker Hall, Professor of Pathology, University College, Bristol, and Pathologist to the Bristol Royal Infirmary.

It has always been difficult to satisfactorily classify pathogenic streptococci. Morphological characters, such as the size of the cocci and the length of their chains, are insufficient. The several staining reactions are not precise enough for accurate differential diagnosis. Apart from broth, the ordinary culture media do not yield information which permits useful deductions. Even the pathogenicity of the organisms may render but little help, since their virulence is easily lost during cultural or other methods, or altered, or raised, by passage through susceptible, or non-susceptible, animals. Serum reactions have also failed to distinguish distinctly between the various types, a fact which will be well appreciated by those who have used anti-streptococcus serum.

An investigation made, however, by Mervyn Gordon[1] upon the chemical powers, or metabolic reactions, of streptococci, has opened up a new field of much promise. As a result of a number of tests of the action of streptococci on various substances, he has found that the following may be employed for diagnostic purposes :—

Two dissaccharides : saccharose and lactose.
One trisaccharide : raffinose.
One polysaccharide : inulin.
Two glucosides : salicin and coniferin.
One alcohol : mannite.

These, together with the clotting of milk, and the reduction of neutral red under anærobic conditions, constitute a series of tests which point to the type of organism involved. They are not infallible, and the individual organisms exhibit considerable variations, but they permit conclusions within certain limits.

Staphylococci also may be differentiated by other tests of a similar nature, but the same precautions must be observed in making the deductions. No hard and fast line is permissible.

From a correlation of all the available records (about 1,200 strains) Andrewes and Horder[2] propose the following classification. Each type may be divided into a number of sub-types or variants :—

[1] Gordon, "Report to Local Government Board," 1906.

[2] Andrewes and Horder, *Lancet*, 1907, i. 167.

1. **Streptococcus equinus,** derived chiefly from air, dust, horse-dung, &c. Generally non-pathogenic.
2. **Streptococcus mitis.** Found in human saliva and fæces. Occasionally pathogenic.
3. **Streptococcus pyogenes.** Pathogenic.
4. **Streptococcus salivarius.** Occurs in saliva and intestine. Pathogenic.
5. **Streptococcus anginosus.** Isolated from "sore throats." Pathogenic.
6. **Streptococcus fæcalis.** Occasionally pathogenic.
7. **Pneumococci.** Pathogenic.

The reactions of these organisms are stated in the following table (Andrewes and Horder, ix.) :—

Types.	Milk clot.	Neutral red.	Saccharose.	Lactose.	Raffinose.	Inulin.	Salicin.	Coniferin.	Mannite.	Growth at 20° C.	Morphology.
Streptococcus pyogenes			+	+	...	...	±	...	...	+	Longus.
,, salivarius	+	±	+	+	±	...	...	...	...	±	Brevis.
,, anginosus	+	±	+	+	...	.	...	...	...	±	Longus.
,, fæcalis	+	+	+	+	...	...	+	+	+	+	Brevis.
Pneumococcus	±	...	+	+	+	±	...	..	...	...	Brevis.

It is of interest to consider the relation of diseased processes to the particular type of streptococcus. The following figures are taken from the papers available :—

1. **Suppuration.**

Streptococcus pyogenes	30	cases.
,, salivarius	5	,,
,, anginosus	8	,,
,, fæcalis	2	,,
Pneumococcus	19	,,

2. **Cystitis.**

Streptococcus fæcalis	2	cases.
,, ,, (variants)	2	,,
,, salivarius	2	,,

Sometimes the streptococci were present alone, sometimes they were associated with B. Coli. It is quite evident that the organisms were intestinal in origin. The streptococcus pyogenes has not been met with in this condition.

3. **Erysipelas and Cellulitis.**
   Streptococcus pyogenes alone. No other forms.

4. **Serous Effusions.**
   Streptococcus pyogenes .. .. 3 cases.
   „ anginosus .. .. 1 case.

5. **Non-suppurative peritonitis,**
   Streptococcus pyogenes (variants) .. .. 4 cases.
   „ salivarius .. .. 3 „

6. **Septicæmia.**
   (*a*) *Puerperal.*
   Streptococcus pyogenes .. .. .. always.
   (*b*) *Following primary streptococcal infection.*
   Streptococcus pyogenes and variants 13 cases.
   „ salivarius .. .. .. 1 case.
   „ anginosus .. .. .. 1 „
   „ fæcalis .. .. .. 2 cases.
   Pneumococcus .. .. 7 „
   (*c*) *Following infections not primarily streptococcal.*
   Streptococcus pyogenes .. .. .. 7 cases.
   „ salivarius .. .. .. 5 „
   Pneumococcus .. .. 2 „

7. **Malignant Endocarditis.**
   Streptococcus pyogenes .. .. 2 cases.
   „ salivarius .. .. 11 „
   „ anginosus .. .. 6 „
   „ fæcalis .. .. 4 „
   Pneumococcus .. .. 1 case.

The preponderance of intestinal and fæcal organisms in this condition is very striking, and suggests that in these patients the low virulence of the organisms may account for the defective " resistance."

In **scarlet fever** the results so far are not sufficiently decisive.

In **acute rheumatism** the organisms isolated appear to give the same reactions as the streptococcus fæcalis. Of course this, or another organism, may be etiologically connected with the disease, but it first must be proved that the organisms already isolated have not been those of " terminal " rather than " causative " infections.

The importance of these results will be appreciated in connection with treatment. It is obvious that the organism must not only be isolated from the lesion, but must be run to earth. Its precise identification is most valuable for prognosis and treatment.

If the indications are for serum treatment, then it is evident that in a serum prepared from organisms similar in type to those isolated from the lesion lies the hope for success.

Should it be necessary to prepare a vaccine from the isolated organism, then the dose will be regulated by a knowledge of the average virulence of the particular type it belongs to.

Investigations which are now in progress point to similar developments with regard to the several types of staphylococci.

* * * * *

Pernicious Anæmia.[1]—The chief points of interest brought out in the discussion on pernicious anæmia are the need for a more systematic classification of the disease, and the necessity for reviewing the condition from the standpoint of the total volume of the blood and its total quantity of hæmoglobin. It has been for some time evident that an extended knowledge of the ætiological factors concerned is absolutely necessary. The attention has been focussed on blood films and blood changes quite long enough; abnormal intestinal processes have been boomed perseveringly without being sufficiently identified; the experimental pathologist must now take up the work. The discussion was opened by Hunter, who at once emphasised the differences between Addison's idiopathic anæmia and Biermer's progressive pernicious anæmia. The latter condition includes a number of different forms of anæmia, while the former is an infective hæmolytic anæmia which is precise in type and distinct in its symptoms. The blood changes in Addison's anæmia are those resulting from hæmolysis and the subsequent regeneration of the broken-down elements. Hence we hear of normoblasts and megaloblasts, as well as of microcytes and macrocytes, far too much being made of the megaloblastic appearances. In addition, the leucocytes are increased, this feature being most marked in the bone marrow, where coarsely granular myelocytes are very abundant. Both the blood and the bone marrow changes, however, vary in extent and in their relations to each other. So far as we at present know, it is impossible to place any definite reliance upon these factors. Among the infective lesions, attention is directed to an exudative, or proliferative, glossitis. To the naked eye the tongue is dry, and generally presents one or more darkly-tinged areas. Certain gastric and intestinal lesions also occur, and *post-mortem* exhibit the appearances of localised degenerative inflammation of the mucosa, and proliferative inflammation of the submucosa.

Discussing the causation of pernicious anæmia, Hunter observed that the ordinary causes of anæmia were insufficient to produce the whole features of the disease. Infection and injection with specific hæmolytic agents alone explained the usual symptoms; the importance of this conception was realised when antiseptic treatment was adopted as a routine measure.

[1] Impressions of a discussion at the **Annual Meeting of the British Medical Association, 1907.**

In some cases Hunter demonstrated the presence of streptococci in the tissues, and this indication for serum treatment was followed with success; but whether he was dealing with a primary coccal infection, or a secondary invasion of the organism in debilitated tissues, was not quite clear.

Gulland pointed out that prolonged blood destruction does not give rise to pernicious anæmia, for the condition precedes the active hæmolytic stage, and thus the toxin may interfere with the formation of the blood elements rather than promote their destruction. There may even be a "predisposition" on the part of some individuals to this action on the formation processes. Leucopenia is often a distinct feature, while the increased number of myelocytes in the bone marrow is a well-known fact. He then compared the appearance of megaloblasts in pernicious anæmia with the constant presence of megaloblasts in the early embryonic life of mammals, and suggested that the increase in the red marrow in pernicious anæmia may arise from a slow formation of megaloblastic tissue, or that, when formed, the life of the tissue may be a short one only.

Lorrain Smith suggested that more attention should be paid to the changes in the spinal cord. Those at present known consist chiefly of advanced sclerosis of various tracts (the segments corresponding to the abdominal area). Much might be learned from an examination of an early case. He also drew attention to the "simulating" forms of anæmia. Malaria is sometimes accompanied by an anæmia of a "pernicious anæmia" type, as well as a secondary anæmia. An ulcerating fibroma of the intestine was accompanied by the signs of pernicious anæmia, and malignant growths are frequently associated with a similar condition.

A most valuable means of determining the extent of the hæmolysis is afforded by the estimation of the total volume of the blood, and its total hæmoglobin contents, by the Haldane-Lorrain Smith method. In fact, it is a question whether the ordinary methods of hæmoglobin estimation throw any real light on the situation. Lorrain Smith examined seven cases of pernicious anæmia, and found that the total amount of hæmoglobin was only 50 per cent. of the normal (in chlorosis it reaches 75 per cent. of the normal, and after the hemorrhage of gastric ulcer there is only 15 per cent. loss from the normal amount). The amount of blood plasma is also an important factor, for œdema of the tissues is a constant feature in pernicious anæmia. The volume of the blood is often 60 per cent. above the normal; a reduction to the normal is a favourable symptom. The fall in the volume is generally accompanied by an increase in the percentage increase of hæmoglobin. This alteration in the volume may be regarded as a distinct effect of the toxin.

Muir observed that the toxin evidently possessed independent

characteristics, for although *bothriocephalus latus* and *saponin* acted on the tissues so as to induce megaloblastic changes, yet they did not entirely reproduce the appearances of pernicious anæmia. The bone-marrow changes should, however, be regarded as the expression of an injury rather than of a reaction, and of an injury which might be recovered from.

Hutchison recorded the fact that he had never met with a case of pernicious anæmia in children. This is of importance in connection with the ætiology of the disease. The marrow and blood-forming organs of the child are generally working at high pressure in order to meet the needs of the growing tissues, and it is easy to suppose that they might exhibit some tendencies to pernicious anæmia. But this is not the case. The only conditions in the child at all comparable to pernicious anæmia are perhaps those of the acute purpuric conditions of childhood. How can this difference between youthful and adult tissues be explained ?

Melland described several cases which presented the characteristic microscopic features of pernicious anæmia without any glossitic, gastric or intestinal symptoms.

Walker Hall stated that the general nutrition in pernicious anæmia shows wide variations. The extent of the variations exceeded the individual factor, and suggested that in the " symptom complex," termed pernicious anæmia, we are dealing with the actions of different types of toxins. He emphasised the need for systematic classification. In detailing the abnormal changes of metabolism, he pointed out that protein retention was a common feature, and that the manner of the protein decomposition suggested renal changes, which deserved recognition during treatment. The cells became exhausted and fatty because of the stress of work in obtaining the necessary amount of oxygen from the diluted plasma. The output of amino acids and of lactic acid required investigation by the newer methods.

The secretion of hydrochloric acid is affected. Subacidity, or absence of hydrochloric, frequently occurs. The gastric secretion exhibits close relationships with the anæmia, being increased or diminished as the anæmia improves or changes for the worse.

The distribution of iron in pernicious anæmia varies considerably. Sometimes met with in the liver, at other times it may occur in both liver and kidney, or in the kidney alone. These peculiarities are difficult to explain.

A few cases which presented all the clinical appearances of pernicious anæmia revealed at the autopsies a number of isolated tubercles in the mesentery, or in the mesentery and liver.

Boycott dealt with the anæmias associated with animal parasites. He pointed out that the two distinct species of ankylostoma duodenale produced identical symptoms of disease, although their geographical distribution was so different. The

fact that the subjects of " parasitic " anæmia suffer more from the anæmia itself than from the position of the parasite in the tissues, suggests that similar conditions might obtain in the other anæmias. It is remarkable that patients with ankylostomatous anæmia possess much more physical energy than those with pernicious anæmia when the hæmoglobin percentages are about the same ; in other words, the loss of hæmoglobin is felt less by the ankylostomatous, than by the pernicious, anæmia patient. Ferguson made a similar statement with regard to the Egyptian fellah, who will do a hard day's work when the hæmoglobin and red blood count are exceptionally low.

Boycott found that in ankylostomatous anæmia the total volume of the blood was increased by 100 per cent., although there was no diminution in the total amount of hæmoglobin. He suggested that the decreased quantity of hæmoglobin per corpuscle may compensate for the increased volume of the blood, so as to enable the necessary oxygenation. During recovery the number of red cells is increased beyond the normal. The pathology of the condition is not distinctly related either to hæmolysis or to hemorrhage ; it must be attributed to some alteration of the balance between the in- and outside of the vascular paths.

Ferguson drew attention to the extensive loss of blood from the large number of bites upon the intestinal mucosa. He considered that a large proportion of the bitten areas became septic, and that the products of the sepsis were responsible for some of the symptoms.

Gulland related two cases suggestive of alimentary tract infection which were decidedly improved by the continued administration of fresh uncooked bone marrow. The marrow was obtained from the shin bone of the ox, and one ounce, or more, spread upon thin slices of bread was given three times a day. At first the raw marrow may occasion retching, but this sensation disappears after a few doses. Gulland suggests that the action of the bone marrow is to neutralise the active toxic agents, and that in pernicious anæmia the bone marrow is deficient in this regard, and so succumbs to the presence of the toxin.

The sum total of the discussion does not indicate any new forms of treatment, although it points to a number of problems for investigation, and emphasises the great loss to the community when a case of pernicious anæmia is allowed to pass through our hands without sufficient record of the observations demanded.

To listen to a discussion of this kind is a depressing experience. The needs for investigation are fully evident ; the objects to be aimed at are outlined clearly ; the possible results are fraught with enormous benefits to the public ; yet the slow progress towards fuller knowledge is appalling. The work needs special training in methods of technique, unlimited time for observation and reflection, and financial assistance to adequately maintain

those men—and their number should be a large one—who elect to devote their lives to this end. The blanks in our English system of education are perhaps most fully illustrated when the scholar becomes a wage-earner, an elector, or an elected representative; for it is our savage consideration for the care of swine and other animals, rather than that of children, or human adults, which permits the scorn of neighbouring nations and allies; they concern themselves with the care of the pig only so far as its presence or consumption affects the health of the people, but consider it a national duty to promote and finance every possible effort towards the prevention of human disease. For tangible hospital buildings, preferably new ones, for elaborate municipal decorations, for additional libraries and displays of arts, the present generation expends its energies. Would that some men followed, or even surpassed, the example of American and German citizens in their provision for the improved health of the nation! The man of foresight must surely recognise that the national physique is the first line of defence of our country, and that if we are to retain our monumental buildings and our prestige, the present racial degeneration and ill-health must be stopped. In plain words, this means financial support for investigation, and the profession must speak with definite and emphatic voice on this point. The public will respond when we honestly state our case, and logically set forth its requirements. Then when workers are numerous, and Institutes for the investigation of disease are provided, the nation as a whole will become keen upon scientific medicine, and it will not be necessary to deplore the slow progress towards the solution of the problem of this grave anæmia, which at present resists the applications of our limited knowledge.

I. Walker Hall.

SURGERY.

There have been few surgical advances within recent years to compare, in their practical importance, with those made in the **treatment of general peritonitis.** A few years ago it was very exceptional for any patient to recover after a widely-diffused suppurative peritonitis; but the conditions are different nowadays, and by the application of modern methods of treatment a large proportion of patients may be saved, even in cases in which there is widely-generalised peritoneal inflammation. The two most important advances in treatment are those generally known in association with the names of Drs. Fowler and Murphy; and although they have only been in use the last few years, they have become recognised as standard methods. The Fowler position consists in placing the patient in the upright sitting posture as soon as possible at the time of, or immediately after, operation; so that the peritoneal exudation may gravitate to

the lower abdomen, where drainage is provided for, away from the more dangerous diaphragmatic region. Dr. Murphy explained his methods before the American Medical Association in 1904. The principles are: (1) Rapid removal of the focus, and closure of the h le in the gut, with as little disturbance of the peritoneum as possible; (2) Drainage through the operation-wound and above the pubes; (3) Rapid procedure, preferably through the rectus, and without the insertion of sutures; (4) Food is withheld from the mouth for two or three days; (5) Continuous saline injections are given by the rectum. These are administered from an irrigator, placed from four to six inches above the level of the anus by means of tubing and a short nozzle having lateral openings. Thus from twelve to twenty pints may, under favourable conditions, be absorbed; and not only is the thirst relieved thereby, but the tongue becomes moist, there is an increase of the urinary and peritoneal flow, and the heart and kidneys are stimulated. The idea is that, by the continuous injection of saline, the direction of osmosis is reversed, and there is accordingly a free flow of peritoneal exudate through the wound.

Although these measures are generally recognised and acted upon, there are minor variations in detail employed by different surgeons, which it may be instructive to survey. In a paper read by Le Conte before the Philadelphia Academy of Surgery[1] and subsequently discussed, we have the following views. The chief factors in abdominal drainage through a pelvic tube are the effect of gravity and the pump-like action of the diaphragm. The rectal irrigation causes such an increase of peritoneal flow that the dressings become readily soaked, and there is an increase in the amount of urine passed. Dr. Gibbon had employed the Fowler position and Murphy treatment with success, but he had not been able to get his patients to absorb so much saline fluid as mentioned. Dr. Harte was convinced of the importance of keeping food away from patients after operation, thus materially diminishing the tendency to distension. The question of drainage was more especially considered in a paper read by Knott[2] before the Chicago Surgical Society and subsequently discussed, and in some respects his method presents some differences. He believes that free drainage of the infected peritoneum is the essential factor in successful treatment, and supports his argument by a record of seventeen recoveries out of nineteen cases, the fatal cases comprising one originating from the appendix, and the other from a large ruptured suppurating ovarian cyst. He thinks that the abdominal incision should always be ample, and made in the middle line either above or below the umbilicus, as the case may be. This is followed by immediate and thorough repair of the diseased parts. Then an incision is made just above the symphysis, and through this a large rubber tube at least one inch in

[1] *Ann. Surg.*, 1906, i. 231, 314. [2] *Ibid.*, 1905, ii. 75, 316.

diameter, previously split from end to end and carrying a gauze wick, is passed to the bottom of the pelvis. Abdomino-vaginal drainage may be similarly arranged for, using a rubber tube without gauze. The abdominal cavity is then thoroughly washed out with gallons of hot salt solution, care being taken to reach all the fossæ and concealed septic areas. The upper incision is then rapidly closed, but before tying the last stitch the abdomen is filled with salt solution by means of a funnel. The lower wound is left open, and in males an additional tube, similar to the first but without the wick, is introduced to the bottom of the pelvis alongside the first. The patient is then raised to the sitting posture while yet on the table, and this position is maintained during removal and subsequently when in bed. The dressings require frequent renewal, and when the flow becomes more scanty the fluid is pumped out through the plain tube every two hours for the next twenty-four hours. All tubes may be withdrawn in from five to eight days. He makes the incision a long one, and closes it except where the drain is inserted, and attaches great importance to filling the abdomen with salt solution; and entirely avoids drainage with plain gauze. Since adopting this technique he states that his mortality has fallen from 90 per cent. to 11 per cent. He strongly objects to evisceration, partial or complete. In the discussion which followed the reading of this paper, Dr. Jacob Frank stated that the only two cases of diffused septic peritonitis that he had ever had recover in the last twenty years were treated on the lines advocated by Dr. Knott. Dr. Eisendrath had met with similar remarkable success by using the Fowler position, avoiding evisceration, but flushing copiously with saline. He pointed out the possibility of similar success by different methods, Dr. Murphy by non-irrigation saving fifteen out of sixteen, and Dr. Mordecai Price saved the whole of seventeen cases by flushing. Others remarked on the importance of not overlooking the right renal pouch; and a heroic fact was mentioned, in which a surgeon reopened the abdomen of his own son eighteen hours after an operation by another surgeon, then absent, and by means of the treatment advocated by Dr. Knott saved the boy's life.

* * * * *

It is well known that after operations for generalised peritonitis there is often a considerable amount of distension or even intestinal obstruction. The surgeon is then in doubt as to whether anything further should be done. Dr. H. Lilenthal records a case in which, after operation following peritonitis with symptoms of obstruction, he reopened the abdomen above the umbilicus, let out a quantity of fluid, and performed a temporary enterostomy on a much-distended loop of jejunum, which he subsequently closed by a secondary suture, the patient recovering.[1] It may

[1] *Ann. Surg.*, 1905, i. 944.

be marked that the evidence is not clear that the enterostomy was the sole reason of success; it may be that the liberation of the fluid was the more important factor in the relief of obstruction.

The subject was discussed at a meeting of the British Gynæcological Society,[1] when Mayo Robson recapitulated the lines of treatment already referred to. Differences of opinion were expressed, some recommending morphine and alcohol with free abdominal flushing, some free purgation by salines or calomel, and some the application of ice at the onset of peritonitis. It cannot be said that the subsequent discussion revealed full practical acquaintance with the advantages of modern treatment. The same may be said of a discussion on the subject at the Royal Academy of Medicine in Ireland.[2]

Before the Royal Medico-Chirurgical Society, Mr. Malcolm expressed views concerning inflammation similar to those previously expressed by Bantock, his view that peritonitis was due to irritation and the temperature simply a nervous reflex being met by arguments from Mr. Dudgeon, who showed that in even the so-called sterile exudate of peritonitis, micro-organisms chiefly staphylococcus albus, could be found.[3]

* * * * *

There are two forms of acute peritonitis, pneumococcal and puerperal, which demand attention; the former in particular having come into special prominence of late. Dr. F. S. Mathews read a paper on "pneumococcal peritonitis," with a report of five cases.[4] He also refers to two papers on the same subject, one by Jensen comprising 106 cases,[5] and one by von Brüns.[6] From a consideration of these papers it is seen that pneumococcal peritonitis is three times as frequent in children as in adults, and that although the sexes are equally affected in adult life, in children it is seven times as frequent in girls as in boys. The peritoneal exudate is copious, thick, and odourless, with a tendency to localisation. The majority of cases have been primary in the peritoneum, and some have been associated with or followed by pneumonia, empyema, pericarditis, otitis media or intestinal lesions. The most characteristic symptoms are: (1) Sudden onset with fever; vomiting for a day or two; slight pain, tenderness and distension; little muscular rigidity. This is followed by an improvement in the symptoms.[5] (2) Then, with the increase of exudate, there appears a tense cystic mass in the hypogastrium, the temperature rises and becomes of remittent type, succeeded by cachexia, weakness, followed by death or recovery after operation. The localised form is more amenable to successful operation, 80 per cent. being successful. The differential diagnosis is difficult,

[1] *Brit. M. J.*, 1907, i. 1483. [2] *Ibid.*, 1906, i. 862.
[3] *Ibid.*, 1905, ii. 1116. [4] *Ann. Surg.*, 1904, ii. 698.
[5] Jensen, *Arch. f. klin. Chir.*, 1903, lxx. 91.
[6] Von Brüns, *Beit. z. klin. Chir.*, 1903, xxix. 57.

and no definite distinguishing point can be stated. The modes of pneumococcal infection of the peritoneum are as follows: through a wound, through the diaphragm, through the genitals, through the intestinal tract, through the blood, and from pneumococcic foci in abdominal organs. It is interesting, however, to notice that in cases of pneumonia, pneumococci may be present in the peritoneum without causing peritonitis.

With regard to puerperal general peritonitis, one may refer to a paper by Dr. Ellice McDonald on the subject.[1] Of eleven cases under his care, four were associated with streptococci, two with staphylococci, one with pneumococci, one with gonococci, and three with multiple infections of the streptococcus associated with the bacillus coli, gonococcus, or the bacillus aërogenes capsulatus. It will thus be seen that puerperal peritonitis is usually streptococcic and usually fatal, though not invariably so. The staphylococcus aureus has been rarely found, and although the gonococcus is such a frequent cause of salpingitis, it is not so commonly the cause of puerperal peritonitis. For further details and references to this subject the paper may be consulted; but with regard to the surgical aspects of the question, there seems to be evidence that polyvalent anti-streptococcic serum may be of some utility, used in association with operation after the method of Murphy for peritonitis in general. That the results are improving is shown by a collection of 121 cases by Jeannin, with nearly 50 per cent. of recoveries.

T. CARWARDINE.

OPHTHALMOLOGY.

At a recent meeting of the Ophthalmological Society held in Edinburgh,[2] Sydney Stephenson read a most instructive paper on the subject of the "spirochæta pallida in relation to the **syphilitic affections of the eye.** He prefers to call the organism of Schaudinn by its newer name of treponema pallidum, which organism has now been found in all forms and stages of syphilis, whether acquired or inherited, human or animal. From the ophthalmic point of view the following facts may be stated: (1) The treponema has been found in the apparently healthy eyes of fœtuses and of infants who have died from congenital syphilis; (2) It has been found in lesions set up experimentally in the eyes of animals by the inoculation of syphilitic material, such as chancres or diseased glands; (3) It has been found in actual syphilitic invasions of the human eye. The conclusion is inevitable, that in the discovery of Schaudinn's organism we have the strongest possible proof of the syphilitic nature of any given disease of the eye. A point concerning interstitial keratitis may be cleared up by our present knowledge, which has long been a mystery. The

[1] *Ann. Surg.*, 1907, i. 203. [2] *Ophthalmoscope*, June 1st, 1907.

existence of spirochætes in the cornea, iris and choroid of the syphilitic infant gives us a hint as to how interstitial keratitis-iritis and choroiditis may be brought about later on in life. Although most of the protozooa may succumb to the natural defensive powers of the body, yet some may remain latent, perhaps in a resting stage, like the trypanosome, until roused into renewed life and activity by an exciting cause, possibly years after the original invasion. On this theory it becomes comparatively easy to understand why in predisposed subjects local injury is so commonly an exciting cause of interstitial keratitis, and why a history of traumatism is far from unknown in choroiditis in those who have acquired a hereditary syphilis. The persistence of a few spirochætes, whilst most had undergone destruction, would explain the relapses now and then observed in cases of interstitial keratitis, and similar considerations would account for the recurrences, not infrequent, of syphilitic choroiditis. In relation to this, it may interest the members of the Society to remember a case of interstitial keratitis with disseminated choroiditis recently shown at the Society's clinical evening. I mentioned the frequent occurrence of injury as an immediate cause of the specific inflammatory attack, and quoted three cases, two of brothers who had normal eyes till over twenty, when one developed keratitis following an injury from dust blowing in his eye, the other one keratitis, from a blow with a hammer in the eye. In each of these case the keratitis came on in the injured eye, but quickly spread to the uninjured organ. The third case was a man who went on apparently with good eyes till the age of 35, when a blow from a twig set up an irritation which ended in a definite attack of interstitial keratitis.

With interstitial keratitis on one's mind, its exceedingly slow course and the difficulty of finding a remedy naturally occurs to one. Mercury and potassium iodide, although no doubt both excellent in their way, seem to take less effect in interstitial keratitis than in any of the other eye troubles due to syphilis. Iritis and choroiditis both yield to their influence as to a charm, but keratitis distinctly hangs fire. Latterly dionine has come into vogue, and in dionine a good friend has been found. Combined in an ointment with atropin, in the proportion of dionine 2 per cent., atropin 1 per cent., an excellent result may be obtained. The application in the form of ointment introduced between the lids seems to take much more effect than when used as drops. Possibly the ointment, adhering to the conjunctiva for a longer time than the drops remain there, may have something to do with it; but be that as it may, dionine and atropin ointment have for me worked wonders when all other remedies have failed miserably. I can recall a young lady, whose interstitial keratitis, a very definite attack too, got well in exactly three weeks. I had prepared her, as I always do, for a long course of treatment, and

mentioned three months as a likely period. This is my own experience. Listen then to the experience of others. Karl Grossmann, of Liverpool, says[1] of dionine, "yet it is a drug which, if once used, with discrimination and without prejudice, is not likely to be omitted from the oculist's outfit. Though a derivate of morphia, it is characterised by the comparative absence of its toxicity, which makes it a safe remedy in eye practice. When brought into contact with the conjunctiva, either in solution, ointment, or in substance, a burning sensation is soon followed by lachrymation and fine injection, often combined with reduced sensibility; on the ocular conjunctiva a fine cobweb of lymphatic vessels becomes visible, and is gradually swallowed up by a more or less strongly-developed chemosis, which often covers the corneal limbus by a sausage-like swelling. The lids swell to such an extent that they cannot be opened, and this state reaches its maximum in about half an hour, when the œdema gradually lessens, to disappear in three to six or even twelve hours."

The action of dionine on the eye is a powerful lymphagogue; it acts, however, as an analgesic as well, but not as an anæsthetic, like cocain. In iritis and iridocyclitis, Grossmann considers we come to the affections in which dionine appears to do most good, and here the analgesic effect on the deep-seated pain is most remarkable. Every now and then one comes on a case where dionine does not produce its usual chemotic action, and in these cases it does least good; furthermore, eyes soon become used to dionine, and after the fourth or fifth application the chemosis is almost *nil*. As soon as this takes place its good effect also disappears, and increasing the dose, even to dusting the eye with the actual powder itself, produces but little reaction; its use should, therefore, be discontinued for several days, when once more its beneficial results will be apparent.

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Thompson Henderson has written an excellent article on the **healing of the corneal wound in cataract extraction.**[2] This paper is based on the examination of thirty-three eyes which had been operated on for cataract. In all these the clinical process of healing was progressing, or had progressed in a perfectly normal manner. In twenty-one of the cases death supervened from some intercurrent affection, in a period varying from three days to a month after the date of operation; in four the eyes were enucleated for pain and secondary glaucoma, while eight specimens were obtained from the *post-mortem* room. This gives a very good range to judge the healing processes by. He points out that in an experimental corneal incision there is a greater retraction of the anterior and posterior than of the central corneal layers, so

[1] *Folia Therap.*, 1907, i. 53. [2] *Ophth. Rev.*, May, 1907.

that the margins of the wound, instead of appearing as two straight lines, show curved surfaces, meeting and touching in the middle, giving the appearance of two triangular spaces with bases respectively in and out. In cataract extraction wounds this appearance, while present, is modified and not evident, on account of the nature and position of the incision. Irregularities of the opposing surfaces are not uncommon, in consequence of the sawing movements with which sections are often completed, giving the wound track a notched, wavy or step-like appearance. He divides the process of repair into three stages: mediate union, primary union, permanent union and cicatrisation, the last of which, he points out, takes a much longer time to accomplish than is generally thought.

Mediate union is brought about by a fibrinous exudate, which glues the margins of the wound together at that point where the distance between them is least. This fibrinous plug is sufficient to retain the aqueous and allow of the restoration of the anterior chamber. He thinks the fibrinous plug is chiefly, if not altogether, a derivative of the altered aqueous humour, as in non-perforating wounds of the cornea, the cut surfaces show little or no fibrinous deposit.

The primary union stage is effected by the surface epithelium and the posterior endothelium. These layers proliferate and grow down the respective margins of the incision till they meet and cover not only the lips of the wound, but also the fibrinous plug that brought about the mediate union. This stage takes very varying times in its accomplishment, from three days to even a fortnight, or even longer after the operation. This disparity is ascribed to the personal factor of the vital activity of the tissues in different cases. This epithelial growth introduces one of the dangers following extraction, if the wound remains in a gaping condition, or the fibrinous plug is not strong enough to resist the growth of epithelium. This latter grows down and over the edge of the corneal wound, and may eventually progress over the posterior surface of the cornea on to the surface of the iris, and so block the corneo-iritic angle, causing glaucoma, for which two of the eyes were eventually enucleated—four and five years respectively—after what at first had been looked on as most successful operations.

While the stratified epithelium on the surface of the cornea is descending into the outer part of the wound, the endothelium on the posterior surface by a similar process lines the inner aspect of the incision to the completion of this primary union. Henderson points out that primary union in a corneal flap incision is thus brought about and completed without the parenchyma playing any part in the process; and judging from the series of cases examined, it is certainly not till the sixteenth day that the corneal elements proper manifest any active sign of reparative activity,

that is, not before the average patient in this country is discharged from hospital.

Permanent union is brought about by a slow and gradual growth of the corneal fibres; these, by their pressure on the epithelial plug, cause it to atrophy and finally to disappear entirely. The interspace between the two cut surfaces is thus reduced to a vanishing point, so that the normal radius of curvature of the cornea is restored.

Firm and permanent cicatrisation is not accomplished for two, three or more months, but when completed it is the exclusive product of the corneal parenchyma, with a course which it is scarcely possible to follow in its entirety. This length of time in regeneration explains a point with which we were often struck in cases of discission for congenital cataract, viz. the ease with which it is possible to reopen a paracentesis wound, even as long as three weeks after it had been first made, with an ordinary repositor, by making quite a gentle pressure on the upper edge of the corneal wound.

A. OGILVY.

Reviews of Books.

Manual of Anatomy. By A. M. BUCHANAN, M.A., M.D. Vol. I. Pp. xvi., 596. London: Baillière, Tindall and Cox. 1906.

The student who is anxious to avoid knowing too much—and he is not uncommon—will welcome this book, because it seems small, and not overburdened with facts. It is a complete surprise to find that so much information has been conveyed in so small a volume. The matter has been well selected, the diction is terse and simple, the numerous illustrations are quite as good as in any English text-book, and one cannot help thinking that this book will prove a serious rival to the much more bulky works, such as Gray, Morris, &c., and we shall indeed be surprised if a successful career does not await this book, if the second volume be as good as the first, the student will welcome a volume of so convenient a size which at the same time contains such a fund of information.

It is, however, unlikely that in a first edition such a book should be absolutely free from blemishes, and there are a few to which we think well to draw the attention of the author.

The account of the development of the chondro-cranium is that which is found in all the text-books. It is not only antiquated, but absolutely erroneous. It has long been pointed out

that the notochord has a quite different relation to the chondrocranium from that represented here; it is also well-known that the terms "parachordal" and "trabeculæ" have no real warrant in the human skull. The accounts of the processes of ossification of the various bones will bear revision, such as those of the malar bone, the mandible, the upper jaw, the sphenoid, the seventh cervical vertebra, the sacrum, the coracoid process of the scapula and ribs, and maybe others.

Speaking generally, the general description of the bones is good, and most of the illustrations are of high excellence, and a credit to the artist. Fig. 84, though very good, is too small; and Fig. 65 does not quite correspond with the text, for although the "nasal groove" on the posterior surface of the nasal bone is shown correctly running down to the middle of the lower margin of the nasal bone, and is said in the text opposite to contain the nasal nerve, yet a nasal notch quite unconnected with this groove is said to convey outwards the terminal cutaneous branch of the nasal nerve. In the description of the cervical vertebræ, the costal and transverse processes are carefully described and distinguished from one another, yet in the description of the seventh cervical vertebra both are alluded to as transverse processes, and the old terms "anterior and posterior tubercles" are used.

With regard to the thoracic vertebræ, more might have been made of the distinguishing characters of the eleventh vertebra, especially worthy of mention being the fact that the inferior articular processes, or if not they, small tubercles at the root of the spine project below the plane of the body and spine, which never happens in the tenth or those thoracic vertebræ above, but always in the twelfth and all below. That very characteristic feature of the fifth lumbar vertebra, viz. the springing of the costal process from the body, might have been made more of, as well as the fact that the transverse diameter of the neural arch greatly exceeds its vertical.

With regard to the long bones, one notices the old fiction repeated, "that during fœtal life the fibula articulates with the femur;" and the same error with reference to the attachment of the pronator teres to the radius is repeated.

One notices that the structure of the calcaneum is not quite intelligible as rendered here, and the area of attachment of the inner head of the accessorius is surely much too small.

The sections on muscles and arteries and nerves of the limbs, which complete the book, leave little to find fault with; but one feels bound to call attention to the scanty description of the articular branches of the external popliteal nerve.

With the exception of the blemishes to which we have drawn attention, and which no doubt will be remedied in editions which we feel sure will follow, Volume I. is excellent, and we strongly recommend it to the notice of the student who is not doing the

most advanced work. It is a creditable addition to the already large number of students' text-books of anatomy— creditable alike to author, artist and publisher.

Cancer of the Breast and its Operative Treatment. By W. SAMPSON HANDLEY. Pp. xii., 232. London: John Murray. 1906.

The aim of the author is "to present for the surgeon's use a careful picture of a breast cancer, of its microscopic ramifications, and of its mode of dissemination, and upon this basis to discuss the methods of operative treatment." Questions of ætiology, pathogenesis, and diagnosis are not considered.

The greater part of the work is devoted to the development of an original hypothesis, that of "lymphatic permeation," to explain the mode of dissemination of cancer of the breast.

By this hypothesis, which is likely to be handed down to posterity as "Handley's (Lymphatic) Permeation Hypothesis," the master process in the dissemination of cancer of the breast is the spread of the growth along the fine lymphatic vessels of the parietes, independently of the transport of cancerous particles by the lymph and blood streams. The existence of the latter mode of dissemination, the "embolic" mode, is admitted, but it is not considered to be the chief process at work. The chief process is a tendril-like growth of cancer from the primary deposit in all directions in the fascial plane along the lymphatics, the growth being independent of the current of lymph. In the parietes the extension is not primarily in the skin, but in the "fascial lymphatic plexus," which lies in the subcutaneous fat upon the deep fascia.

After giving a lucid and excellently illustrated account of the macroscopic and microscopic investigations upon which the permeation hypothesis has been founded, the author proceeds, in the final chapters, to enunciate the principles which should underlie the operative treatment of breast cancer, and he suggests modifications of technique which are likely to improve the results of these operations if his hypothesis of dissemination represents the truth.

In our opinion it is the plain duty of every surgeon who operates for mammary cancer to give due consideration to the views which the author has advanced. We believe that in time all surgeons will become acquainted with them more or less thoroughly, for they seem to be endowed with "permeative" force. We advise that the acquaintance be made a thorough one at once, through the medium of the author's book itself. If we mistake not, the investigations he has recorded will mark an

important epoch in the history of the campaign against cancer of the breast; but whether that be so or not, the fact remains that the book is one of conspicuous merit and fascinating interest.

The Essential Similarity of Innocent and Malignant Tumours. By CHARLES W. CATHCART, M.A., M.B. Bristol: John Wright and Co. 1907.

Some eighty-six admirably reproduced photographs are appended to seventy-nine pages of letterpress. The latter concerns itself with the question of the relations existent between innocent and malignant tumours. The writer sets out to prove that there is a definite demonstrable gradation from innocent to malignant tumours, that this transformation in character may sometimes be observed in the same tumours, and that combinations of character may sometimes be met with.

The examples of these conditions are chiefly drawn from bony growths, and while we must admit that a good case is made out, it is a moot point whether the conclusions drawn from bony growths may be applied to other tumours. However, the matter is one of general interest, and the surgeon will find a perusal of this book both suggestive and helpful.

The impression gained from the arguments advanced is an enforcement of the doctrine of "original sin." All tumours are deemed to possess latent malignancy, even though they appear to be temporarily innocent.

Antenatal Pathology and Hygiene: the Embryo. By J. W. BALLANTYNE, M.D. Pp. xix., 697. Edinburgh: William Green and Sons. 1904.

This volume is a most interesting and exhaustive statement of the results of the author's researches in a domain of pathology hitherto insufficiently subjected to scientific study. No pains have been spared to obtain the fullest possible information on the subject, and numerous specimens of various types of fœtal monstrosities and instances of congenital defects and abnormalities for the purpose of scientific description and classification. It is difficult in dealing with such a work to decide on the parts of it to which attention should be directed. While it is necessary that the whole volume should be read connectedly, in order that the valuable information contained in it may not be missed, we may still direct attention to portions of it which are perhaps of rather more general interest than others. A most detailed and clear account of the embryology is, with its chronology, given to commence with, but, as the author very justly remarks, as regards

human embryology our knowledge practically commences with the early ova described by Hubert Peters and Leopold.

We know nothing practically of the changes which occur in the fertilised human ovum before the fifth day after impregnation, which is the approximate date of the Peter's ovum, that of Leopold being a little older.

Capital plates of sections of these two ova are introduced, but unfortunately the reference lettering is not always as distinct as it might be. One of the most interesting sections is the account of experimental terato-genesis, detailing the experiments of the St. Hilaires, Charles Féré and C. Darester on the incubation of hens' eggs, showing how in various ways, by mechanical interference with the developing ovum or by subjecting it to various toxic or unnatural thermal or other influences, it is possible to produce various types of monstrous chicks.

He suggests that monsters are produced invariably by the arrest of development of a part of the fœtus at a certain stage, while the remaining parts progress normally, and shows that many monstrosities are represented at certain stages of normal development.

The chapter on maternal impressions should also be read carefully by those interested. He gives a most interesting historical account of these so-called phenomena, and one or two curious instances of his own researches into the origin of histories supposed to be established as scientific facts. When a scientific writer attributes to a certain observer as a fact observed and recorded by him a statement which was to the effect that he had seen the record made by another observer, it is easy to understand how, among the uninstructed public in any country, the extraordinary stories, many of which he quotes, become current and obtain universal acceptance. The account of the pathology of hydatid mole is extremely interesting, and explains many of the more intricate features of the pathology of that disease.

As we have already stated, it is extremely difficult to select sections of a work of this kind; it must be read as a whole, and will amply repay the labour of perusal by anyone interested in the subject. It is an excellent presentation in a truly scientific form of facts hitherto isolated and often exaggerated in description, classifying all the abnormalities described in a coherent and rational manner, and giving the author's deductions from facts observed by himself, or accurately recorded by others, in a manner at once lucid and forcible.

Biographic Clinics. By GEORGE M. GOULD, M.D. Vol. III. Pp. 516. London: Rebman Limited. 1905.

Dr. Gould starts on the assumption that scarcely any recognition is given by physicians, or even by oculists, to the fact that errors of refraction give rise to numerous discomforts, which

might be removed by the application of suitable spectacles; and if the gravamen were true that the medical profession does not fairly consider the conditions of eye-strain, and their bearings on the treatment of migraine and other numerous discomforts, his book would be of service in drawing attention to the undoubted and well-recognised fact that the correction of astigmatism and of refraction errors is frequently essential for the relief of numerous patients, and very useful in helping many others.

But he seems to assume that he is preaching a new gospel, while on the contrary he is overstating and exaggerating the value of a well recognised and very widely applied form of treatment. He says: "The Continent of Europe still lingers in pitiful barbarism upon this subject. When my patients return from these benighted countries, they tell tales that should be gathered for the amusement of coming and humour-loving generations." "Patients suffering from eye-strain are the prey of the travelling spectacle vendor, who should often be jailed, the quack optician and oculist, the jeweller, who knows nothing of optics or of ophthalmology."

At any rate, there seem numerous efforts being made to apply the remedy which Dr. Gould appears to consider the one panacea for all human illness. But we can assure him that refraction testing is well understood, and is applied with every scientific care by English oculists and by their colleagues throughout the Continent of Europe, and that the book before us is not likely to be of the least service in assisting the investigation of eye-strain from any scientific or clinical or unique standpoint. The book is amusing, and may give hope even to sufferers from incurable maladies, that they may yet be relieved by what is arrogantly called the "new ophthalmology."

No intelligent ophthalmic surgeon will find any help in the book, except to encourage him to plod on with refraction errors, with the certainty that some good will accrue to his patient from the use of spectacles. The nasal surgeon is informed that errors of refraction cause sinus disease. He will naturally retort, and with good reason: "No, it is the sinus disease that caused the eye symptoms, which you will in vain try to relieve by spectacles."

Migraine is no doubt very often due to eye-strain—everyone has known this for many years—and English physicians always send such cases to the oculist before they attempt any treatment by advice or drugs. It is unfair to the practitioner to say that eye-strain is not always sought for as a cause of migraine: it is unfair for any writer of recent years to claim any originality for suggesting the use of glasses in these cases. A narrow specialist, an exaggerator who has become an extremist, has indeed become a hobby rider in the writing of this book (p. 38).

John Addington Symonds is supposed to have suffered from an uncorrected eye-strain, to which alone all his pains and weak-

nesses are attributed ; but there is no positive evidence adduced of any error of refraction or of muscle balance.

Taine's ill-health is attributed by Dr. Gould to a strabismus and ptosis that he suffered from. But there are plenty of squinters and those with paralysed eye muscles who do not suffer on that account from any other defect of health. Eye-strain is often a cause of headache, and may cause other neuroses. But many neuroses exist, and headache may be present, without ocular defects. The first inquiry in migraine should be as to the eye conditions ; but migraine may be present without abnormality of eye, and the correction of eye defect may be quite inoperative against migraine symptoms.

The later chapters in the book are interesting, and show considerable knowledge and investigation. Dr. Gould quotes in support of his views writers of articles chiefly in 1904 and 1903. But as long ago as 1893, an article insisting on the necessity for careful testing of the eyesight and the conditions of the muscle balance in asthenopia and ocular headache, &c., appeared in the *Bristol Medico-Chirurgical Journal*. Writers in this *Journal* have supported the view that careful refraction work and the proper adaptation of glasses is an essential form of medical diagnosis and treatment ; but they do not claim spectacles as an infallible cure for all forms of ill-health.

High Frequency Currents. By H. Evelyn Crook, M.D., B.S. Pp. x., 206. London : Baillière, Tindall and Cox. 1907.

There can be no doubt that in certain forms of disease treatment by the high frequency electrical currents is of very great value, and it is in the hope " that it may in some way help to bring before the notice of medical men the undoubted therapeutical value of high frequency currents in certain pathological conditions," that the author submits this book to the medical profession.

The first part of the book is devoted to a description of the production of the currents, and of the various forms of apparatus before the public for the purpose. This description is most thorough, and moreover is given in a most lucid style, the result being that it is one of the most valuable and helpful accounts that we have met with.

The second part is devoted to the consideration of the physiological effects of the currents, in which a very good summary of the work of the best observers—more especially on the continent —is given.

The rest of the book is given up to the consideration of the therapeutical uses of high frequency currents, and it is this part that will probably be of most interest to the practitioner. It mainly consists of reports of cases by various workers, which

prove undoubtedly that in tuberculous disease, rheumatic disease of all kinds, &c., the high frequency currents are of very great value.

This form of electrical treatment has perhaps suffered from too much being expected of it when it was first introduced, and also, perhaps, as is pointed out in the preface, " because it has unfortunately in many instances fallen into the hands of irresponsible and unqualified persons ; " nevertheless, it is of the greatest use in certain forms of disease, and such treatises as the one under review, written in a dispassionate and judicial way, will do much to place the treatment on its proper footing in therapeutics.

Clinical Studies in the Treatment of the Nutritional Disorders of Infancy. By RALPH VINCENT, M.D. Pp. 83. London : Baillière, Tindall & Cox. 1906.

This little book is a supplement to the author's *Nutrition of the Infant*, published a couple of years ago, and is a series of clinical reports on infants treated in the Infants' Hospital. The object of the author is to show that slight variations in the percentages of the food stuffs make all the difference in the success or failure of infant feeding, especially in the marasmic, rachitic or otherwise abnormal babies who are brought into hospitals. The cases are rather elaborately reported, and the milk prescriptions given in full. On general principles we are in entire agreement with the author. Careful milk prescriptions either worked out on percentages of the chief constituents or on some other convenient method, are the only means we have of regulating the feeding of infants who cannot be brought up on the breast, and of restoring to health those who have been improperly dieted. The very small variations in diet percentages to which Dr. Vincent attributes so much importance do not appear to us of proved value when judged from the records in this book.

In the first place, the cases are apparently selected, not simply serial, and there is no evidence that if all the infants admitted to the Infants' Hospital were included any better results would be shown than are obtained in other Children's Hospitals, where so much stress is not laid upon minute alterations in diet. Then again, infants, even when carefully fed and looked after, show curious alterations in the rate of growth and general condition apart from small variations in diet. Dr. Vincent's own records show that the children gain and lose weight when the diet is not altered just as they do when it is. Certain comments in the book seem to us of rather doubtful advisability. For instance on p. 40, " In these cases " (presumably in half-starved infants when put on more nourishing diet) " the liver and tissues become engorged ; the liver especially comes into a condition of stasis, and the food

then acts as an irritant." The exact meaning of the expression "tissues" is not clear, nor is the evidence of stasis of the liver given; apparently the fact that purgation and reduction of food effects an improvement is regarded as a proof of the correctness of the pathological theory. Again, on p. 14, describing a child who at the age of three months weighed 7 lb. 5 oz., the author remarks that the "nervous condition was due to the terrible deprivation of fat in the previous diet." Doubtless the previous diet had been very deficient in fat, but we are not aware of any evidence to show that deprivation of this food stuff alone induces any special changes in the central nervous system either organic or functional.

With Dr. Vincent's methods in general no fault can be found, and we trust that the Infants' Hospital will continue to do good work in a field where workers are much needed; but we cannot say that we are altogether convinced by the present brochure that all Dr. Vincent's views will stand the test of further experience.

Encyclopedia and Dictionary of Medicine and Surgery. Vols. II., III., IV. Edinburgh: William Green and Sons. 1907.—The succeeding volumes of this great work are following each other without delay. The first volume was noticed in our issue of December, 1906, and thr e others are now before us, carrying the subject matter to the word Intussusception, and completing more than one-third of the whole work. The four volumes now issued contain almost all of the articles of the first five volumes of the *Encyclopædia Medica*, together with a great mass of new material, consisting for the most part of shorter contributions. The names of the authors are a sufficient indication of the quality of their writings, it would be invidious to select any for especial commendation, and the editorial part of the work is beyond all praise. The numerous cross-references have been prepared with great care, and add much to the value of the work as facilitating immediate reference to all the aspects of any given subject.

A Dictionary of Medical Diagnosis. By HARRY LAWRENCE MCKISACK, M.D. Pp. xi., 583. London: Baillière, Tindall & Cox. 1907.—This work is described by its author as a treatise on the signs and symptoms observed in diseased conditions, for the use of medical practitioners and students. It is therefore an exposition of the language of signs as presented in the bodies of our patients. The author endeavours to avoid the discussion of diseases as they are described in the text-books of medicine, and restricts himself to a description of the various signs and symptoms of disease. The dictionary form is convenient for easy reference, but some of the articles are of considerable length, notably that on blood examination, which gives all needful details with regard to the study of stained films, and the determination of the opsonic

power of the serum. The author may well expect to be the teacher over a much wider field than the Royal Victoria Hospital of Belfast.

On Treatment. By HARRY CAMPBELL, M.B., B.S. Pp. viii., 421. London: Baillière, Tindall & Cox. 1907.—This is not a text-book, but a series of essays, giving the personal point of view of the author on certain questions of therapeutics. The subjects are very varied, ranging from the education and personality of the physician and his proceedure in consultation through a great variety of interesting topics up to the latest fads in diet and therapeutics. From the previous works of the author we should expect a good literary product founded on common sense. We are not disappointed, for the book is full of sound teaching, and is so interesting, that it may well take precedence over the popular novel of the day.

Gout. By ARTHUR P. LUFF, M.D. London: Cassell and Co. 1907.—The issue of a third edition of this well-known book shows that gout cannot yet be considered as an extinct disease. In fact, as a source of polemical discussion, it appears likely to afford some interest for another century or two. The enthusiasm for golf and outdoor exercise at one time bid fair to diminish the transmission of this favourite family heirloom, but with the appearance of the motor hopes such as these speedily vanished. Vibration, deficient exercise, increasing appetite, and perpetual faucial dryness all prognose the recurrence of swathed limbs and restrained expressions. Hence it is well to have at hand a summary of recent work. Dr. Luff has considerably enlarged his original monograph, and readers will find a clearly-stated résumé of the present views upon this most difficult subject. It must be admitted that there is still much to be done before the inner metabolic changes in gout are delineated, but it is satisfactory to note that a toxic theory is substituted for the discarded renal theory. Treatment is considered in detail, and a new feature consists of the differential diagnosis in chronic diseases of the joints. There is a very useful table upon the choice of a spa. Bath is recommended as exceedingly good for the absorption of gouty deposits from the joints and tissues. Harrogate is useful for the same purposes, and also for gouty dyspepsia, hepatic symptoms, glycosuria of gouty origin, and gouty skin affections.

Selected Essays on Syphilis and Small-pox. Translations and Reprints from Various Sources. Edited by ALFRED E. RUSSELL, M.D. Lond. Pp. xii., 215. London: The New Sydenham Society. 1906.—This volume presents several papers of great interest illustrating the progress of current experimental research. It will be found very convenient for reference to have Schaudinn and Metchnikoff's experimental investigations on syphilis, and the studies of Calkins and Councilman on variola, all work of

extreme importance, gathered together into a well-printed and handy volume.

The Book of Prescriptions (BEASLEY). Rewritten by E. W. LUCAS. Eighth Edition. Pp. ix., 366. London: J. & A. Churchill. 1905.—The popularity of this book has called for an eighth edition, and there is now an introduction of two pages in length by Dr. Arthur Latham. Dr. Latham says that the book has been written to assist the senior student in his work at the hospital; if so, the senior student must be careful to distinguish pharmacopœial from other preparations, for there is little or no distinction made for him. Should the senior student look up podophyllin for a prescription to assist him in prescribing that drug in a mixture, he will be disappointed, for the four prescriptions given are all pills, and there is no mention of the ammoniated tincture, nor of a suitable menstruum should the pharmacopœial tincture be used. He will be wise if he refrains from calling sodium tartrate sodii citras (p. 279). He should also refrain from learning certain prescriptions of the blunderbuss type, at any rate before he is qualified, for he will find that a prescription containing over twenty drugs will not be thought highly of by his examiners, even though he plead that it is the "Anti-Cholera Mixture, R.C.P." But he may find, when he is qualified, that it is a useful and up-to-date little book, which will often help him to make a suitable mixture, or remind him of a line of treatment which he had forgotten.

A Handbook of Medical Jurisprudence and Toxicology. By WILLIAM A. BREND, M.A., M.B., B.Sc. Pp. xiii., 287. London: Charles Griffin & Company, Limited. 1906.—Though this is a small book on a large subject, it is remarkably complete, and is specially interesting from the large number of recent legal cases which it embodies. We have tested it in numerous places, and find that it is on the whole singularly free from omissions, though, from its compressed style, students would not always see the importance of the facts stated. Still, in the space which the author has allowed himself, he writes clearly and with vigour, so that his pages are by no means unattractive, even apart from the cases he cites or describes from his own experience. We shall hope to see an expanded edition later on, which should be an invaluable book. The various chapters are of unequal value. In the treatment of opium-poisoning there is no clear statement of the curious excretion into the stomach of opium or morphine circulating in the blood, which can be removed by repeated lavage with permanganate after an interval. Even morphine injected hypodermically can be thus recovered. Similarly in the treatment of poisoning by arsenic, the quantities of sodium carbonate and perchloride of iron to be used for forming ferric hydrate might have been given in detail. The tests for phos-

phorus are restricted to Mitscherlich's method, and the dangers of phosphuretted hydrogen are omitted altogether. We should also like to have seen some reference to the much debated precautions ordered by the Home Office as to the glazing of pottery, and finally confirmed under the arbitration of Lord James of Hereford. In fact, the account of several of the important poisons is far too sketchy and brief. A much better chapter, and one of general interest, is the one on "the obligations statutory and moral of the medical man." The law on malpraxis, professional secrecy, undue influence, and death certificates is here explained better than in most treatises of the kind. Indeed, we know of none which sets forth so many recent decisions of importance to the practitioner. Hutchison's useful list of the ingredients of the common patent medicines, such as Cockle's pills and pink pills, is given in an appendix. The book is well printed in clear small type on good thin paper.

Medical Diagnosis. By J. J. GRAHAM BROWN, M.D., and W. T. RITCHIE, M.D. Fifth Edition. Pp. xvi., 508. Edinburgh: Wm. Green and Sons. 1906.—The success that this book has obtained is well deserved, and the appearance of the fifth edition is sufficient evidence of its popularity. It is hardly necessary to say more than that this edition has been brought thoroughly up to date, and may be relied upon as a trustworthy and complete handbook for ordinary clinical work. It is profusely illustrated, and the illustrations are good. The additions made add greatly to its value. To those who know the book no further commendation is necessary, but we may add that its convenient size is not the least of its recommendations.

Elements of Practical Medicine. By ALFRED H. CARTER, M.D. Ninth Edition. Pp. xvi., 614. London: H. K. Lewis. 1906.—A ninth edition is its own commendation: the book has fully shown its adaptation to the needs of the student of medicine. It has been carefully revised, and has not grown much larger. The very full therapeutic index appears to be needful in these days, when the tendency is to accept the ready-made combinations of the wholesale druggist rather than to devise whatever may be appropriate to the case and the occasion.

The Etiology and Diagnosis of Epidemic Cerebro-Spinal Meningitis. By ARCHIBALD WILLIAM TAVES, M.D. Pp. 42. Providence, R.I.: Snow & Farnham. 1906.—This essay won the prize awarded by the Trustees of the Fiske Fund at the annual meeting of the Rhode Island Medical Society in 1906. Its motto, "Keep Watch," is a very appropriate one, inasmuch as epidemics of this disease and sporadic cases also crop up unexpectedly here and there, and diagnosis is difficult until a bacteriological examination of the fluid obtained by lumbar puncture has been made.

The British Journal of Tuberculosis. Edited by T. N. KELYNACK, M.D. Vol. I., No. 1. January, 1907. London: Baillière, Tindall and Cox.—Another journal has been established in furtherance of the crusade against tuberculosis. This, its first number, contains a series of papers by the best-known writers and authorities. We are told that "the time seems ripe for a great forward movement against tuberculosis . . . and that here, as in other spheres, the future belongs to the brave." We trust that the editor will have such support as will enable him to carry on the campaign with the same energy and success as are shown by the January number, which should be read by all who take any interest in the attempt to combat tubercular diseases.

The Sigmoidoscope. By P. LOCKHART MUMMERY, B.C. Cantab. Pp. 88. London: Baillière, Tindall & Cox. 1906.—This is an elementary treatise based upon the author's experience of his modification of Prof. Strauss's electric sigmoidoscope: the first half of which describes the methods of using the instrument, and the second half deals with some of the appearances met with. There appears to be a limited future for this method of diagnosis of diseases of the lower bowel which cannot be adequately discovered by other means, and the assistance of simultaneous air-inflation has diminished the dangers of sigmoidoscopy, and increased its possibilities. At the same time, surgeons of experience are well aware of the dangers attending the passage of long rigid instruments through the rectum by the inexperienced. The author records a case of perforation of the bowel into the peritoneum by the sigmoidoscope, although he says "the only danger which it seems to me might attend the use of the symoidoscope is that of tearing the mesentery of the sigmoid." It is doubtless an instrument of precision, essential in some cases to accurate diagnosis; but we predict that the average man will do wisely by leaving such examinations to those specially experienced, lest he be tempted to pass the sigmoidoscope as he might a bougie, with results disastrous to his patient and distressing to himself.

Philadelphia Hospital Reports. Vol. VI. Philadelphia: Bradley Printing Co. 1905.—The first paper is one of local interest, dealing with the first clinical reports issued by the Philadelphia Hospital. The other papers deal with various clinical subjects in reference to cases in the Hospital; and we are only doing justice to these papers when we say that they maintain a remarkably high standard, and will well repay perusal. The neurological articles perhaps especially deserve mention.

Manual of Surgery. By ALEXIS THOMSON and ALEXANDER MILES. Second Edition. Vol. I. Pp. xxi., 808. Edinburgh: Young J. Pentland. 1906.—The appearance of the second

edition of this book in a little over two years testifies to its popularity. The first volume has been increased in size by forty odd pages. Some of the sections have been re-written, some of the old illustrations replaced by better ones, and some additional ones added. Specially is this noticeable in the orthopædic section at the end of the book. Also new are the photo-micrographs illustrating surgical bacteriology. These alterations and additions have added to the value of the work, which we still consider the best modern text-book on surgery for students.

Glimpses of American Surgery in 1906. By C. HAMILTON WHITEFORD. Pp. 63. London: Harrison and Sons. 1906.—This is quite an interesting booklet. In simple style we are told the impressions of the author at several of the American surgical clinics, notably of the Mayo Brothers, of Rochester, Minn.; of Murphy and Ochsner, of Chicago. The individuality of the various surgeons is nicely caught, and though we have heard a good many of the little trite sayings from the same mouths before, yet they will be new, interesting and often amusing to the profession in England.

Spinal Curvatures. By HEATHER BIGG. Pp. viii., 240. London: J. & A. Churchill. 1905.—This book has been written to advocate the mechanical as opposed to the gymnastic treatment of scoliosis. The author not only recommends a support for very advanced cases in which little good can be expected from exercises for the spine, and for which most surgeons would recommend one, but for all cases, at every stage of deformity. The general opinion of surgeons at the present time is that such mechanical supports have no curative action, but prevent further deformity, relieve pain, and should only be used for cases too severe for other methods of treatment. Heather Bigg, on the other hand, maintains that such mechanical support is curative, and he does not employ exercises to strengthen the spinal muscles, but applies an instrument to support the thorax on the pelvis, which is constantly worn in the day-time. We do not believe that any form of such an apparatus can mould the deformed spine straighter, but we do think that if the spine is supported in this way *during its period of growth* it may in time grow straight, or straighter, just as a bent tibia may when further bending is prevented by a suitable splint. We are therefore inclined to attach more importance to a supporting apparatus in the treatment of scoliosis than many surgeons, but we do not think that it should replace all other methods in cases which are not too advanced to be likely to derive benefit from them, and in which there is no marked change in the shape of the bodies of the vertebræ. Mr. Heather Bigg strongly objects to the gymnastic method as advocated by Mr. Bernard Roth and others, and he devotes a chapter to the consideration of Mr. Roth's

treatment; but we cannot say that he shows that the gymnastic treatment is valueless, though perhaps some surgeons have gone too far in denouncing the mechanical support. At any rate, it is interesting to read this original and well-written little book by Heather Bigg, and consider both sides of the question. The author goes very fully into the history of the treatment of scoliosis, and there are many good illustrations of cases and instruments in the book.

Grundriss der Orthopädischen Chirurgie. By Dr. MAX DAVID. Second Edition. Pp. v., 240. Berlin: S. Karger. 1906.—The first edition was published in 1900. The present one is considerably enlarged. It is essentially a practical work, most of the text being devoted to descriptions of the various deformities, and to carefully-described details of their treatment. The etiology and pathology are somewhat curtailed. The illustrations, although not of great artistic merit, serve well their purpose, and are very numerous. The authors quoted are for the most part German and Austrian, and comprise a very good selection. Compared with English surgeons, there is much more value attached to gradual reductions and forcible wrenchings of deformities, and also a greater use of plaster of Paris. The descriptions of the many complicated instruments with the aid of diagrams is clear and convincing; these, especially in the cure of fixed joints, are much more used abroad than with us. The importance also of massage is not exaggerated. It is a work which would well repay translation, and be of considerable use to practitioners in England.

The Sequelae of Gonorrhea in both sexes. By W. LOUIS CHAPMAN, M.D. Pp. 117. Providence: Snow and Farnham. 1905. —A prize was awarded to the author for this essay by the Trustees of the Fiske Fund, Providence. As stated in the preface, it is largely a work of compilation of the most recently acquired knowledge on the subject plus investigation on the part of the author in some original directions. It deals very fully with the subject embraced. Commencing with the bacteriology, and showing that a gonotoxin may produce the symptoms apart from the actual organisms, a chapter is devoted to the mechanism of gonorrhœa and the importance of latent gonorrhœa. In dealing with the sequelæ common to both sexes, of special interest perhaps are the stomatitis of new-born infants, the various skin invasions, which may be of the nature of eczema, herpes, urticaria, &c., and the affections of the nervous system, neuritis, &c. In the sequelæ peculiar to the male, attention is paid to the part played by the prostate, and the possibility of gonorrhœal affection of that organ being a precursor to the enlargement of old age; and in those peculiar to the female, peritonitis and the effect of gonorrhœa in producing sterility are the most noticable sections. Treatment is entirely omitted.

Women's Health, and How to take care of it. By FLORENCE STACPOOLE. Second Edition. Pp. viii., 165. Bristol: John Wright & Co. 1906.—This treatise is the outcome of much thoughtful experience in nursing the ailments peculiar to women, and is written in a plain, clear style that befits the subject. It may be warmly recommended to women who wish to know how to preserve their health, or to take care of the health of girls under their care. It will be specially useful to young women who have to live in lonely and distant parts of the world. The medical information is cleverly reproduced, but the distinction between anæmia and chlorosis is not clearly put. A particular excellence of the book is the appeal not to neglect the early symptoms—duly set forth—which may announce cancer of the uterus. We like the chapter on the climacteric period, and especially the advice as to diet; but a few persons stint themselves too much to maintain an unnatural slimness. There is perhaps rather much prescribing, especially of iron, which should *never* be taken except under medical advice; but probably nurses only will understand how to make use of the prescriptions. The book may be read with advantage by young medical practitioners.

Medical Electricity. By H. LEWIS JONES, M.A., M.D. Fifth Edition. Pp. xv., 519. London: H. K. Lewis. 1906.—Dr. Lewis Jones has added to the usefulness of his handbook by bringing it up to date. The author, himself a pioneer in the electrical world, gives what is best in the new work, and records new methods of usefulness for the old. The chapter on X-rays has been largely extended, and the electrical methods of dealing with various skin diseases also find a place. The experiments of Leduc in electrolysis are quoted, and a very useful addition to that subject is made in this present edition. Dr. Jones has been paying personal attention to the subject of introducing drugs into the body locally by electrolysis, and as much interest has been stimulated recently by the remarkable results obtainable in rodent ulcer by the introduction of the ions of zinc, it is valuable to have a treatise of reference for details of the technique. The handbook is so well supplied with illustrations, and the descriptions of apparatus, &c., are so easily followed, that we have no hesitation in recommending this book to any who wish to obtain some knowledge of the rapidly-extending subject of medical electricity.

Climatotherapy and Balneotherapy. By Sir HERMANN WEBER, M.D., and F. PARKES WEBER, M.D. Pp. 833. London: Smith, Elder & Co. 1907.—This volume on the climates and mineral water health resorts (spas) of Europe and North Africa, including the general principles of climatotherapy and balneotherapy, and hints as to the employment of various physical and dietetic methods, is practically a third edition of Sir H. Weber's book

on the *Mineral Waters and Health Resorts of Europe*, but much enlarged in respect to medical climatology. Questions of climate and baths become of increasing importance as the facilities for rapid and easy travel annually increase, and books of this kind are soon out of date. Accordingly, we may welcome this volume as a very comprehensive summary of everything known on the subject, and giving the views of those whose experience must command universal regard. We cannot attempt a review of a book like this. It should be on the table for constant reference.

The Röntgen Rays in the Diagnosis of Diseases of the Chest. By HUGH WALSHAM, M.A., M.D., and G. HARRISON ORTON, M.A., M.D. Pp. 80. London: H. K. Lewis. 1906.—Dr. Walsham is well known as one of the pioneers in this country in applying the X-rays to the diagnosis of chest disease, and, in conjunction with Dr. Orton, he has given us this small volume, in which his experience is summarised. The use of the rays for diagnosing intra-thoracic disease is becoming much more general than it was, but the profession at large is still unaware to a great extent of its great value in diagnosis: and the authors have done well in drawing attention to this by saying that although it is now ten years since attention was drawn to the subject, "yet to-day the mass of practitioners in this country are quite ignorant of the value of the rays in the diagnosis of chest diseases." This little book ought to have a wide circulation, and will go far to remove this want of knowledge, which is much to be deplored. The value of the rays in diagnosing early phthisis is now generally admitted, and the chapter on this subject is one of the best in the book. The importance of the symptom of impaired movement of the diaphragm as seen on the fluorescent screen, which in many cases is present before any physical signs can be made out is rightly insisted on; and by skiagraphy it can often be demonstrated that disease has attacked both lungs, where only one shows signs of disease by physical signs. A number of cases illustrating these and other conditions are given. In the chapter on thoracic aneurism the difficulty and often the impossibility of diagnosis is pointed out; by means of skiagraphy, however, a correct diagnosis can practically always be made, the authors pointing out that to ensure a correct diagnosis the fluorescent screen must be used and the thorax skiagraphed in more than one position. This chapter, too, contains the records of interesting cases of aneurism thus diagnosed. This charmingly written little book is one of the most important contributions to the literature of skiagraphy that has appeared of late, and is cordially to be recommended to the notice both of X-ray workers—for the useful hints as to technique which it contains—and also to all members of the profession, as it points out to them the great assistance that they will receive from skiagraphy in all chest diseases, especially in those which are more or less

obscure. It should be mentioned that the excellent reproductions of skiagrams, which elucidate the text, are quite one of the features of the book.

Lessons on Massage. By MARGARET D. PALMER. Third Edition. Pp. xvi., 272. London: Baillière, Tindall and Cox. 1907.—This book has had a large circulation, and several new chapters have been added in this edition. It is an instruction on the methods of massage; the elementary anatomy and physiology necessary for this is also included. As such it is clearly and concisely written, and easily understood by nurses, for whom it is especially meant. It does not pretend to advise as to which cases should have massage, or to discuss the reasons why the movements bring about the required results. Many conditions which are greatly benefited by this treatment are not even mentioned, and as it is no part of the trained masseuse to know them, it is probably wise that they have been omitted. One point insisted on is very important, namely the great advantage of working without lubricant or powder where possible. It would add to the utility of the work if some diagrams were introduced showing the direction and extent, by means of arrowed lines, of the various excursions made by the hands. Swedish movements are not dealt with, though these, and especially the respiratory exercises, ought to be known to every masseuse. The book just covers what is required in the examination of the Incorporated Society of Trained Masseuses.

Lectures on Massage and Electricity in the Treatment of Disease. By THOMAS STRETCH DOWSE, M.D. Sixth Edition. Pp. xii., 447. Bristol: J. Wright & Co. 1906.—We have been frequently called upon to review this book, and the sixth edition has not grown larger than the fourth. The author directs attention to the great and increasing appreciation of the value of massage as a remedial agent. His book has done much to bring about this result, but he regrets that the long-continued resistance to massage in this country has led to much abuse of this method in unqualified hands—"a good masseur should possess skill, intellect and judgment; but, above all, he must be a good manipulator." A close study of this book cannot fail to be of great value, both to those who prescribe and who perform massage and use electrical methods of treatment.

The Uses of X-rays in General Practice. By R. HIGHAM COOPER. Pp. x., 98. London: Baillière, Tindall and Cox. 1906.—**X-rays in General Practice.** By A. E. WALTER, Captain I.M.S. Pp. xii., 175. London: John Lane. 1906.—To quote the preface of the first of these books, "the intention of this little book is that of giving the general practitioner some idea of the help he may get in his practice from the use of the X-rays," and admirably it fulfils its object. It is quite a pleasure to come across a book so

absolutely devoid of "padding," and to have a plain and straightforward account of the author's own method of work, and his experience of the use of the X-rays, both in diagnosis and treatment. After a masterly short summary of the physics of the X-ray, the author goes on to give in a most lucid way directions for working an induction coil with an improved pattern of the ordinary platinum break, wisely referring the reader to larger works on the subject for details of the more elaborate breaks which may be beyond the reach of the ordinary practitioner; and then proceeds to discuss the use of the rays in diagnosis and treatment. In the former most practical directions are given for taking skiagrams, such as the position of the tube as regards the part that is to be skiagraphed, length of exposure required, &c., &c., and in the latter the author confines himself entirely to a record of his own work, and gives the results of his own personal experience in the treatment of the various diseases in which the X-ray is used as a method of treatment. We can cordially recommend this little manual to all X-ray workers, not only to the novice, but also to the more advanced worker, who will find in its short 88 pages more that will be of practical use to them than in many volumes of much more pretentious size.

The second of these books is addressed to "the general practitioner, the student, and other non-experts in the X-rays." Like many other books on the subject now before the medical public, it gives advice as to choice of apparatus, how to set about taking a skiagram, &c.; but perhaps the most interesting part of the book is the account the author gives of the equipment he has devised for active service in the field. There are a number of most excellent illustrations; the one facing the title-page of a Chinese woman's foot, and of the skiagram of the same later on, are of special interest because of the difficulty in obtaining them, owing to its being "considered an act of the utmost indelicacy" for a Chinese woman to expose her foot. To the lover of personal detail, it may be of interest to have reproduced for his benefit the actual lesion which occurred when Lord Kitchener broke his leg—an ordinary fracture of the tibia and fibula. (We wonder whether Lord K. would be equally pleased?) But we do take exception to the statement on page 99: "His Excellency Lord Kitchener suffered a good deal when he first began to get about," and "he had a three weeks' course of high-frequency treatment, and I have his authority for saying that he was much benefitted thereby." This savours much more of the "Electropathic Institute" advertisement than of one of the volumes of the *Practitioner's Handbooks* Series.

Transactions of the Epidemiological Society of London. New Series. Vol. XXIV. Session 1904—1905. London: Williams and Norgate. 1905.—Amongst the interesting series of papers in this volume, probably the keenest interest will be felt in Prof.

MacWeeney's contribution, "On the Relation of the Parasitic Protozoa to each other and to Human Disease," and in Dr. Nuttall's "Ticks and Tick-transmitted Disease," which deal with a subject that is now undergoing very rapid growth as knowledge accumulates. Other subjects dealt with in this volume are "Ankylostomiasis," "The Etiology of Rheumatic Fever," "Phthisis Rates," "The Spread of Small-pox occasioned by Small-pox Hospitals," and the President (Dr. Whitelegge, C.B.) contributes a paper on "The Epidemiological Aspects of Industrial Disease."

Reports of the Society for the Study of Disease in Children. Vol. VI. Session 1905—1906. London: J. and A. Churchill.—The sixth volume of the reports of this young and vigorous Society fully maintains the high standard of excellence established by the preceding volumes. Dr. Whipham reports a case of splenic anæmia, which illustrates the difficulties of the anæmias of children when the splenic group is involved. Mr. Mackintosh contributes a common-sense paper on diet during the second year of life. We are surprised that a Society devoted to the study of disease in children does not pay more attention to the important question of feeding. The December meeting is occupied with a full-dress debate on "Pleural effusions, serous and purulent," which, owing to the eminence of the various speakers engaged, may be regarded as a succinct summary of our present knowledge of the subject. The Wightman Lecture was delivered by M. Broca, M.D., of Paris, who took for his subject "Appendicitis: acute and chronic." Dr. Bertram Rogers describes a case of acute atrophy of the liver. In a valuable paper on "Enlarged Veins in Children," Dr. A. G. Gibson points out the importance of enlarged veins on the thorax, in the diagnosis of enlarged tubercular mediastinal glands in children, when associated with other symptoms.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Second Series. Vol. XI.—Mo—Nyström. Pp. 858. Washington: Government Printing Office. 1906.—This volume includes 8,023 author-titles, 5,634 subject-titles of separate books and pamphlets, and 34,211 titles of articles in periodicals. It may help the uninitiated to form some idea of the immense amount of labour bestowed on the preparation of this invaluable work if we mention that under the headings of "Nerve," "Nerves," and "Nervous" there are about 155 pages of closely-printed references.

Wellcome's Photographic Exposure Record and Diary, 1907. London: Burroughs, Wellcome & Co. Pp. 268.—This popular pocket book has undergone its annual revision, and its information brought up to date. The simplicity and convenience of

the mechanical calculator and light tables render the estimation of the correct exposure for any subject an easy matter. It is an excellent handbook for photographers generally.

The Influence of Cod Liver Oil on Tuberculosis. By J. W. WELLS, M.D., D.P.H. Pp. 83. Manchester: The University Press. 1907.—Cod Liver Oil has for many years been looked upon as a most useful agent in the treatment of consumption. Of late it has been falling into disrepute, as it commonly forms no part of the programme of sanatorium treatment. The experiments recorded in this booklet, conducted in the Public Health Laboratory of the University of Manchester under the supervision of Professor Sheridan Delépine, tend to show that "pigs affected with tuberculosis continued to increase rapidly in weight, and appeared quite comfortable and happy for a long period when the Cod-liver Oil Emulsion was added to the usual diet. Their tubercle lesions showed signs of possible recovery, tuberculous glands became fibrous and calcified, and the tubercle bacilli more difficult to demonstrate." With this evidence before us, we may well ask whether the use of Cod Liver Oil in the treatment of phthisis should be discontinued.

Guy's Hospital Reports. Vol. LX. London: J. and A. Churchill. 1906.—The present volume opens with a valuable paper, by Dr. Frederick Taylor, on "The Chronic Relapsing Pyrexia of Hodgkin's Disease," in which he records nine cases where this disease was accompanied by relapsing pyrexia. He points out that the temperature may be continuously high for long periods, and that periods of higher fever may then alternate with periods of lower fever, and that the recognition of the relapsing form of pyrexia may be of assistance in the diagnosis of some doubtful cases. Dr. Herbert French and Mr. H. T. Hicks write on "Mitral Stenosis and Pregnancy," presenting in tabular form statistics of 300 consecutive cases of mitral stenosis in women over twenty who have been in Guy's Hospital. They consider that the dangers of pregnancy in these cases have been overstated, and that it is not just to negative marriage in all women with mitral stenosis. Two highly interesting lectures, delivered at the Physiological Laboratory, Guy's Hospital, by Dr. J. S. Haldane—a brother of the present War Minister—on "Life and Mechanism," are here published. Dr. Haldane considers that while the old vitalistic working hypothesis in physiology was altogether unsatisfactory, the mechanistic hypothesis which some fifty years ago replaced it, is inconsistent with observed phenomena, and must also be rejected. In biology we cannot get beyond the fundamental working conception of the living organism, which is an organism, and not a machine. The lectures are expressed in admirable language, and are worthy of thoughtful study. We have no space to notice the other articles in this volume, which are of unusual importance and interest.

Editorial Notes.

Bristol Royal Infirmary: New Rules proposed.

THE accompanying advertisement in the daily papers recites new rules to be proposed at the next meeting of the Board of Governors:—

BRISTOL ROYAL INFIRMARY.

THE GOVERNORS are requested to attend the HALF-YEARLY MEETING of the BOARD, to be held in the BOARD-ROOM on TUESDAY, 24th September, 1907, at 12 Noon.

The following alteration to the Rules will be proposed:—

"THAT all appointments to the Honorary Staff "to be made subsequent to the passing of this "Rule shall be held subject to the following regu-"lations, in lieu of those contained in Rule 35.

"RULE 36.—No member of the Honorary Staff "shall hold any Union or Club appointment. **No "member of the full Staff shall hold any other profes-"sional public appointment other than Professorship "or Lectureship** at any University, College, or "School. **No member of the Assistant Staff shall "hold any other General Hospital appointment, nor "more than one special Hospital appointment.**

"That the full Physicians shall limit their "practice to medical work. That the full Surgeons "shall limit their practice to surgical work. That "each of the Specialists shall limit his practice "to his speciality."

* * * *

16th September, 1907.

Not far short of two hundred years ago—in 1735—the Bristol Royal Infirmary was founded by the happy association of lay and medical philanthropists, and the partnership thus constituted in "Charity Universal," the motto inscribed over the main entrance to our oldest hospital, remains to this day the dominant spirit controlling numberless hospitals that have followed in the wake of this almost the first of provincial English hospitals.

Such a partnership must not be confused with a commercial union, for, unlike business connections, the end and aim of both medical and lay partners has not been simply self advancement, but relief to the suffering and the advancement of medicine.

At a time when anything in the nature of prestige attaching to a hospital had yet to be created, the profession of medicine

gave its best, and then, as now, no new discovery or advancement could be kept a trade secret for the aggrandisement of the discoverer, all being thrown into the common store of knowledge, so that rich and poor alike should derive the utmost benefit possible. Hence the prestige of hospitals grew apace, and lay philanthropists nobly responded to the ever-increasing call for new and better hospitals, that cover the land in every civilised community. Have medical men ever lagged in fulfilling their share in the partnership ?

Hospital doctors, and the general practitioners alike, have lessened, to their own disadvantage, the toll that disease levies, and the general public little know the constant charity of even the poorest of general practitioners, any more than they will ever know the measure of professional charity outside any hospital walls of such men as Swayne, Long Fox, and Markham Skerritt, whom we have so recently lost. These names, and such men as Budd, Symonds, Augustin Prichard and Greig Smith, and countless predecessors in medicine and surgery, have raised the prestige of our Bristol hospitals, as other physicians and surgeons have done elsewhere, and in so doing, apart from their gift in the work done, have also directly aided in securing financial support for the buildings and endowments: they gave a full measure and running over.

The governors to-day have inherited those buildings and endowments, and the doctors have inherited the prestige. Each is a precious heritage—the one from the laymen, and the other from the doctors—to their respective successors and sons, and we think we may fairly say that the representatives of each are successfully maintaining and adding to their legacies, held in trust for the Bristol poor. We have already, in our former note, pointed out that this prestige is much overrated. Hospital appointments are of little value in themselves, except in so far as they are opportunities for doing good work; and anyone holding such appointments, and only doing as little as any number of rules may demand, but failing to maintain the prestige by enthusiastic devotion to the work he takes in hand, finds the prestige is a tinkling cymbal. Are these easily-satisfied energies

what our hospitals want? Are these the kind of men that have placed our British hospitals in the position they now occupy, or who can hope in future to command the respect of their medical brethren? No, it is the man who takes infinite pains over details, who is untiring in his search for knowledge, and who is ready to go far afield in its pursuit, filling up spare hours where opportunities arise.

In our last issue we referred to the question of dual appointments, because the committee of the Bristol General Hospital had made "vexatious" use of their rule requiring the sanction of the committee before any member of their honorary staff accepted an appointment at any other hospital. The comedy of a number of merchants, tradesmen, parsons and ministers, stockbrokers and lawyers, having the right to decide how a physician or surgeon may employ his spare time does not strike these good and worthy gentlemen; but as the case in question was settled by the surgeon refusing to be bound by the veto so arbitrarily exercised, we can cordially congratulate that committee on rescinding their ruling; yet how far better would it be if they rescinded the derogatory rule.

Unfortunately it is this rule and ruling that has aroused the committee of the Royal Infirmary, for during its two centuries of existence such arbitrary powers over the medical staff have never been constituted, and the staff would not willingly subscribe to such an "Act of Supremacy." But how much more arbitrary, though perhaps less derogatory, are the new rules sought to be imposed at the Royal Infirmary, since in future any physician or surgeon or specialist who seeks election is forbidden to accept any other public medical appointment—except a lectureship—whether it be a paid office or an exercise of charity! Inasmuch as custom has determined that the staff at representative teaching hospitals practise as pure physicians and surgeons respectively, and provided the age limit at the Bristol Royal Infirmary is raised to the usual 60th year, we see nothing to complain of in this custom being made a rule, not only because it is due to the medical profession and to general practitioners in particular that those of their

number who accept such opportunities should use them to the highest interests and for the advance of medicine, but because the governors of a hospital have as much right to demand that their physicians or surgeons shall be pure physicians or surgeons, as they have to insist on their having certain degrees or diplomas; and they fail to do their duty if they do not get the best possible skill for their patients. But by what right do the committee or governors of the Royal Infirmary presume to dictate to their honorary physicians or surgeons how they shall occupy their life apart from their duties to the Bristol Royal Infirmary?

The living governors and their lay committee have neither built nor endowed the institution, and are mainly the inheritors of the generosity of bygone ages, to which they add their quota. So with the medical staff. Here, as elsewhere, they have not made the prestige of the Royal Infirmary; they inherit it from their medical forefathers, but they, too, add their quota to the good repute. The governors inherit the buildings and endowment, and it is theirs to maintain; but so, too, the medical profession inherit the medical prestige, and that is theirs to maintain. But, alas! and here is the pity, the lay governor, realising that there is a prestige attaching to his hospital, considers it is his to manipulate even to the detriment of the medical staff. If you serve our institution, they say, you must have your charitable wings clipped and go lame. You medical men have duties to perform in our hospital, and it is not enough that these are faithfully and honourably discharged. It is not enough that your forefathers have so raised the prestige of our hospital that we can, and do, insist on your having the highest qualifications, and practising as pure physicians, surgeons and specialists—that you have suggested yourselves because it appeared a real advantage to the institution—but notwithstanding this we compel you, whether you like it or not, to accept terms which are vexatious, if not derogatory, by binding you to forego any other charitable effort, or to accept even any remunerated office usually held by consultants. In your young years you may waste your spare time in any way you wish, but one thing you shall not do. You shall not, in your keen love of your

profession, serve another hospital, to gain experience outside our walls, that you may become better physicians or surgeons.

What should we say of the new landlord whose estate, inherited from his forefathers, had been tilled and improved and continuously raised in value by the labours of the tenant through many generations of father and son, if he turned round on his tenant saying, The loyal and devoted labour of your forefathers has increased the value and status of the tenancy; what they gave so willingly, and in good faith, I will use to make hard conditions for you; if you don't like them, well, you have your remedy—you can turn out? Is this Charity Universal?

We do not suppose for a moment that the generous and honourable laymen of our hospitals are capable of deliberately injuring or slighting their staff. It must surely be misconception only that induces them thus to forget what they owe to the medical profession, for medical science is undivided, and is not only national, it is international. If the medical work at British hospitals is to be honorary, let it be continued as the charity of the whole medical profession; otherwise it should be treated on true business lines, and duly paid for like the buildings, food and nursing. Let us wake up, and see that the laymen do not exploit the profession, and ruin our work with their so-called "business principles." The blow is none the less hurtful because it is dealt by friends.

* * * * *

John Free.

ABOUT forty years before the departure of Cabot on his voyage across the western ocean, another less-noted but sufficiently important enterprise had been embarked upon by a pioneer of medical learning in Bristol. Attracted, doubtless, by the reports of a revival of learning in the Universities of Northern Italy, John Free, with a few fellow-students, accepted the offer of an Italian shipmaster to sail from the port of Bristol to ascertain at first hand what new secrets of science the Italian professors had to impart. Already Mondini and his successor, Bertrucci (Guy de Chauliac's master), had instituted

on a firm foundation the study of anatomy at Bologna, and more than a century had passed since Mondini's first public demonstration of a human dissection. In France a papal bull had been issued, permitting dissection of the human body in the University of Montpellier, but to England, engaged on the great wars with France of Henry V. and VI., these advances in science had not yet been introduced, though no doubt the intercourse of French and English surgeons in the English army had aroused some curiosity among English savants to go and see for themselves what this strange way of studying the human frame might be; for Galen and his satellite commentators reigned supreme in medicine still after the lapse of thirteen centuries.

In 1449 Gilbert Kymer, who had been Rector of the Faculty of Physicians in London when the abortive Conjoint College of Physicians and Surgeons was set up (1423), admitted, in his capacity as Chancellor of the University of Oxford, a certain John Free, of Balliol College, to the degree of B.A., who in 1454 proceeded as M.A., and ultimately became a Fellow of his College. As usual in those days, Free subsequently took Orders in the Church, and although it is not known that he had any previous connection with this city (for he had been born in London), he shortly came to Bristol and became Rector of St. Michael's *in monte* (on the hill where it stands to this day). Of his life in Bristol there is no record, but he had by then acquired something of the reputation for culture and learning of which Leland speaks with such admiration. Eventually, with three or four friends stimulated by the same greed of knowledge, he found in Bristol an Italian ship on which they took passage to the country where the liberal arts had so recently revived. Pits states (overlooking perhaps his connection with St. Michael's) that " at length upon quitting Oxford he resorted to Venta Belgarum, that is Bristol, not for the purpose of remaining there, but in order thence to take shipping for foreign parts, for his great desire was to visit Italy, which he accordingly did."

Free (or Phreas as he was called in Italy, according to the custom of latinising the names of foreigners) studied at the

Universities of Ferrara, Florence and Padua, and settled as a teacher of medicine in the first-named. His writings against Diodorus Siculus gained for him the gratitude of the Pope (Pius II.), who, wishing to reward his orthodoxy by some special mark of favour, appointed him Bishop of Bath, which See had just then fallen vacant. To this office he was never actually consecrated, for he fell ill and died in 1465 before he could return to England, poisoned, it was hinted, by those whose interest it was that the bishopric should be otherwise bestowed.

The importance to medicine of this venture from Bristol can scarcely be overestimated; a rapid succession of students followed in Free's footsteps. England was participating in that intellectual intercourse with the centres of European learning which culminated in the invitation of Erasmus to be Professor of Greek in Cambridge, and the appointment of John Caius as Professor of Greek in Padua, whence he returned to organise the scientific study of medicine in England.

Never before or since did England occupy so high a position in the republic of learning, and Bristol may recall with justifiable pride that it was from our port that John Free set out "*qui primus Anglorum erat, qui propulsâ barbarie, patriam honesto labore bonis literis restituit,*" and that he set the example followed by such masters of science as Linacre and Caius, Harvey, Locke and Sydenham.

Notes on Preparations for the Sick.

"Elixoid" Formates Compound.—BURROUGHS, WELLCOME & Co., London.—Each fluid ounce contains:—

Calcium Formate, gr. 12 (0.778 grm.).
Sodium Formate, gr. 6 (0.389 grm.).
Magnesium Formate, gr. 6 (0.389 grm.).

It is claimed that the formates possess marked antiseptic and diuretic properties. "Elixoid" Formates Compound presents a convenient and palatable means of administering the formates of calcium, sodium and magnesium without causing gastric disturbance. Two fluid drachms may be taken thrice daily, in water, after food.

Quinine Acetyl-Salicylate.—BURROUGHS, WELLCOME & Co., London.—This is another recent preparation brought out by Messrs. Burroughs and Wellcome, and it is likely to be appreciated by the medical profession.

Acetyl-salicylic acid, or "aspirin," has given satisfactory results in cases where the use of salicylates was deemed necessary, and the combination of this acid with quinine should certainly give results justifying its introduction. No doubt it would be hydrolysed in the duodenum with liberation of quinine and salts of acetic and salicylic acids, and it is thought by some pharmacologists that better results are obtained when active products are thus liberated by hydrolysis within the system, than when they are directly administered.

Tabloids.—BURROUGHS, WELLCOME & Co., London.—**Gingamint:** soda-mint compound.—Each contains sodium bicarbonate, gr. v.; ammonium bicarbonate, gr. $\frac{1}{2}$; with gingamint, saccharine and oil of peppermint. This preparation is a valuable antacid and stomachic, employed in the relief of dyspepsia, nausea, heartburn and flatulence. It promotes appetite and digestion, relieves griping, and produces a diffusible stimulant effect.

Slippery Elm.—Mucilage of slippery elm is largely used as a demulcent and sedative astringent. Alone, or combined with phenol, it is employed locally in pharyngitis and other throat affections, and internally in diarrhœa and dysentery. The mucilage is also stated to have a nutritive value. "Tabloid" Slippery Elm presents a convenient and reliable means of administration. Each represents gr. v. (0.324 gm.) of mucilage of slippery elm, and one may be slowly dissolved in the mouth or swallowed whole with water as required.

"Tabloid" Carbolic Acid and Slippery Elm.—Each contains carbolic acid, gr. $\frac{1}{2}$ (0.032 gm.). One may be slowly dissolved in the mouth, or one to two swallowed whole with water twice or thrice daily after food.

Ernutin.—BURROUGHS, WELLCOME & Co., London.—This drug contains the specific active principles of ergot, the chief of which is the alkaloid ergotoxine. It is physiologically standardised, and presents a uniform degree of activity. For oral administration the dose is 30 to 60 minims. The tabloid for hypodermic use contains gr. $\frac{1}{100}$.

"Wellcome" Brand Anæsthetics.—BURROUGHS, WELLCOME & Co., London. It is well known that chloroform is subject to decomposition by the action of air and ordinary daylight. To

avoid all possibility of deterioration from such influences. "Wellcome" Brand Chloroform is issued in hermetically-sealed amber-coloured glass tubes.

"Wellcome" Brand Ether, S.G. 720, which conforms to the requirements of the British Pharmacopœia for pure ether, is also issued in hermetically-sealed glass tubes. By this method perfectly fresh and chemically pure anæsthetics are always available.

Nutritive Liquid Peptone with Creosote.—PARKE, DAVIS & Co., London.—This is described as a nutritive liquid, containing peptone and the digested nutritive constituents of malt.

As there are various preparations of peptone on the market, an analysis of the above was made in order to verify the statements concerning it.

We consider it to be one of the best of its kind, especially as it contains nearly 20 per cent. of solid matter, and therefore is more than a simple stimulant. It contains non-coagulable proteid, together with extract of malt. On distilling the liquid, a little alcohol passed over, probably added as a preservative.

It possesses a pleasant flavour, and is altogether an attractive preparation. The combination with creosote and guaiacol (nutritive liquid peptone with creosote) should be very useful and acceptable to patients with chronic lung diseases.

Triple Glycerophosphates with Nuclein (Chocolate-coated tablets).—PARKE, DAVIS & Co.—These tablets provide the tonic, nutritive and reconstructive properties of the glycerophosphates in association with the bactericidal action of nuclein. Nuclein, it will be remembered, also possesses the valuable power of increasing leucocytosis. This combination is valuable in debilitated conditions generally, and particularly in the various manifestations of tubercular disease, as scrofula, abscess, lupus, adenitis, ulcers and phthisis.

No. 509 Compressed Tablets, Phenol-Phthalein Compound.—PARKE, DAVIS & Co.—Each of these tablets contains 1 grain of phenol-phthalein, $\frac{1}{500}$ grain strychnine sulphate, and $\frac{1}{100}$ grain of extract of belladonna leaves. The laxative effect of phenol-phthalein is well known; it is reputed to be particularly well adapted for use in habitual constipation, acting without pain or tenesmus. The strychnine and belladonna are valuable auxiliaries, giving tone to the intestinal tract and restoring natural function. The sugar-coated tablet is a particularly acceptable as well as convenient mode of prescribing these drugs. The dose for adults is from three to five tablets at bed-time; for children and delicate women, from one to three tablets will be sufficient.

Iodalbin.—PARKE, DAVIS & Co.—Iodalbin is an iodo-proteid compound containing 21 to 25 per cent. of iodine. It is in the form of an almost tasteless powder, insoluble in water, acids or alcohol, but readily soluble in alkaline solutions. When administered, it passes unchanged through the stomach, and is gradually absorbed in the intestine, thus avoiding the gastric irritation that the alkaline iodides are liable to excite, and also ensuring a milder systemic effect. Experiments on animals show the presence of iodine in the saliva very shortly after its administration, but very little can be traced in the fæces. Several months of close clinical observation demonstrate that iodalbin produces the typical alterative effect of the organic iodides without their disadvantages. Iodalbin may therefore be advantageously prescribed in preference to the alkaline iodides in all cases where such treatment is indicated. A smaller dose, 5 to 10 grains, is sufficient, though many patients have taken as much as 60 grains per diem without untoward effects.

Adrenalin and Eucaine Tablets.—PARKE, DAVIS & Co.—Considerable attention is now being given to local analgesia, as preferable in many cases to total anæsthesia, and for this purpose "Eudrenine" is daily being more and more used. For medical men abroad and for those who prefer to make their own solution at the time of operating, these tablets of Adrenalin and Eucaine have been introduced. Each contains $\frac{1}{20000}$ grain of adrenalin and $\frac{1}{2}$ grain of eucaine lactate, with a proportion of sodium chloride sufficient to impart salinity to the solution. One tablet dissolved in 17 minims of sterile distilled water forms an analgesic and ischæmic agent for use in dental extractions and small operations, containing 1 per cent. of the eucaine salt and about 1 of adrenalin in 30,000 parts. One tablet, dissolved in 85 minims of sterile distilled water forms a solution similar in strength to that used in operations at University College Hospital, as reported in *The Lancet*, July 25th, 1903, and *The British Medical Journal*, December 24th, 1904.

Formidine.—PARKE, DAVIS & Co.—Formidine is a potent antiseptic suitable for internal or external use. Chemically it is methylene disalicylic acid iodide, a condensation product of iodine, formic aldehyde, and salicylic acid. It is insoluble in water, alcohol and dilute acids. In contact with alkaline organic secretions, it slowly dissolves and develops the characteristic germicidal properties of its constituents, hence it is most useful for bacterial infections of the intestinal tract. The dose is from 1 to 5 grains. Externally it is used in place of iodoform as a stimulating, non-irritating dressing for wounds, ulcers, &c., and as a dusting powder for various skin affections. Its antiseptic

power has been proved to be greater than that of iodoform, whilst it is free from offensive odour, does not stain the skin or clothing, does not irritate, and does not produce toxic effects when applied over large areas.

Tannigen has been found particularly useful *in infantile diarrhœa*. Tannigen is an odourless and tasteless preparation. The fact that it passes unchanged through the stomach, and is not decomposed into tannic acid until it reaches the intestinal canal, renders it of great value in gastro-intestinal affections. Dose: For adults, up to 15 grains; children, 2—5 grains, in milk, as frequently as the occasion may require. A convenient way of administering Tannigen is the tablet form.

Tilia.—PEEK, FREAN & Co., London.—Tilia is a name given to a milk proteid manufactured by Peek, Frean and Co.

It is a white powder, almost tasteless and odourless, and gives the characteristic proteid reactions when examined chemically.

As a food accessory milk proteids are extremely valuable, being very rich in nitrogen, and readily digested and assimilated.

In addition to Tilia in the form of a powder, Peek, Frean and Co. have put on the market various products containing Tilia, such as cocoa and various kinds of biscuits, to which the introduction of a large percentage of the proteid is guaranteed.

We examined several of these with satisfactory results, but consider the "Diabetic Biscuits" deserving of special notice. They are starch and sugar free, and when placed on a dilute solution of iodine show not the slightest blue colouration—a very delicate test, showing the absence of starch.

We are pleased to speak highly of these preparations.

Pertussin.—E. TAESCHNER, Berlin.—This preparation is a saccharated elixir, which contains as the chief active ingredient essential oil of thyme. It is recommended for whooping-cough, asthma, catarrh of the larynx, &c. It is not unpleasant to take, and acts as a fairly powerful expectorant.

It is doubtful whether the use of such proprietary articles as this can be justified when so many well-known and approved remedies, prepared from published formulæ, are at the disposal of the physician.

Grape Nuts.—GRAPE NUTS Co., Shoe Lane, London, E.C.—During recent years grape nuts have been much advertised as a food.

An analysis of the preparation reveals the presence of proteids

and soluble carbohydrates (dextrin and reducing sugars), which have been derived from the starch present in the cereals used in the manufacture. Some of the starch has remained unchanged during the preparation of grape nuts; this we consider an advantage for most people.

Claroma : Catarrh Scent.—J. M. BANNERMAN, Edinburgh.—This inhalant for catarrh is a germicide remedy, a concentrated solution of antiseptics with essential oils. It is free from cocaine and opiates, and it produces a cool, soothing sensation which seems to free the breathing, arrest discharge and sneezing, and give relief to the pain and fulness of the head.

Tablets.—THE BAYER COMPANY LIMITED, St. Dunstan's Hill, London.

Aspirin.
Helmitol.
Heroin Hydrochl. (gr. $\frac{1}{24}$).
Tannigen.
Trional-Bayer.
Veronal.

Many of the special preparations of this firm are now issued in five-grain tablets. We have received specimens of the above-named. They represent a convenient and handy mode of administration of drugs which are becoming increasingly useful. The tablets are of the highest quality, and they readily disintegrate.

For the chemical analyses mentioned in the above report we have to thank Mr. O. C. M. Davis, B.Sc., A.I.C., of the University College Laboratory.

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the List in June :

August 31st, 1907.

L. M. Griffiths (1)	1 volume.
Middlesex Hospital (2)	1 ,,
R. Shingleton Smith, M.D. (3)	5 volumes.

Unbound periodicals have been received from Dr. Shingleton Smith, and pamphlets have been presented by Mr. L. M. Griffiths.

SIXTY-FIFTH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund, or received through the *Journal*.

Adamson, H. G. .. *Skin Affections of Childhood* 1907
Ballance, C. A. .. *Some Points in the Surgery of the Brain* .. 1907
Barwell, H. .. .. *Diseases of the Larynx* 1907
Bennie, P. B. .. *Treatment of Hip Disease* 1907
Budin, P. .. .. *The Nursling.* (Tr. by W. J. Maloney) .. 1907
Campbell, H. .. *On Treatment* 1907
Ehrlich, P. .. .. *Collected Studies on Immunity.* (Tr. by C. Bolduan) 1906
Guthrie, L. G. .. *Functional Nervous Disorders in Childhood* 1907
Horsley and Mary D. Sturge, Sir V. *Alcohol and the Human Body* 1907
Janet, P. .. .. .. *The Major Symptoms of Hysteria* 1907
Johnson, J. .. .. *Change of Air* .. .. .. (1) 3rd Ed. 1832
Lowe, P. .. .. *A Discourse on the Whole Art of Chyrurgery* (3) 4th Ed. 1654
Luff, A. P. .. .. *Gout* .. .. 3rd Ed. 1907
Madden, F. C. .. *Bilharziosis* 1907
Maddox, E. E. .. *Ophthalmological Prisms* .. 5th Ed. 1907
Miles, A. Thomson and A. *Manual of Surgery* Vol. II. 2nd Ed. 1907
Murrell, W. .. *What to do in Cases of Poisoning* 10th Ed. 1907
Oppenheimer, C. .. *Toxines and Anti-Toxines.* (Tr. by C. A. Mitchell) 1906
Osler, W. .. .. *The Growth of Truth* .. .. (3) 1907
Pharmacopœia of the Bristol Royal Hospital for Sick Children and Women 1907
Poynton, F. J. .. *Heart Disease and Thoracic Aneurysm* .. 1907
Sargent, P. .. .. *Surgical Emergencies* 1907
Scott, H. H. .. .. *Post-Graduate Clinical Studies.* 1st Ser. 1907
Starling, E. H. .. *The Croonian Lectures* .. .. (3) 1905
Startin, J. (Ed.) .. *A Skin Pharmacopœia* .. .. .. 6th Ed. 1907
Steell, G. .. .. *Diseases of the Heart* 1907
Sturge, Sir V. Horsley and Mary D. *Alcohol and the Human Body* 1907
Sutherland, G. A. *Treatment of Disease in Children* 1907
Sylvius, F. de la B. *Praxeos Medicæ* .. .. (3) *Editio altera* 1672
Thomson and A. Miles, A. *Manual of Surgery.* Vol. II. 2nd Ed. 1907

TRANSACTIONS, REPORTS, JOURNALS, &c.

American Dermatological Association, Transactions of the 1906
American Journal of Ophthalmology, The .. .. Vol. XXIII. 1906
Archives of Neurology .. .. Vols. II., III. 1903–07

Archives of the Middlesex Hospital	(2) Vol. IX.	1907
Bäder-Almanach	(3)	1907
Bristol Port Sanitary District, Annual Report of the Medical Officers of the, 1906		1907
British Medical Journal, The	Vol. I. for	1907
Clinical Journal, The	Vol. XXIX.	1907
Edinburgh Medical Journal, The	N.S., Vol. XXI.	1907
English Catalogue of Books, The, for 1906..		1907
Hospitals—		
St. Thomas's Hospital Reports	Vol. XXXIV.	1906
Westminster Hospital Reports	Vol. XV.	1907
Journal of Laryngology, The	Vol. XXI.	1906
Journal of Medical Research, The	Vol. XV.	1906
Lancet, The	Vol. I. for	1907
Library Association Record, The	Vol. VIII.	1906
Münchener medizinische Wochenschrift	Bd. I.	1907
Obstetrical Transactions	Vol. XLVIII.	1907
Progressive Medicine	Vol. II.	1907

MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

June 12th, 1907, at Weston-super-Mare.

Mr. JAMES TAYLOR, President, in the Chair.

Dr. CHARLES and Prof. WALKER HALL showed specimens from a case of **Carcinoma of the Stomach.**

Dr. H. STANLEY BALLANCE showed a female patient upon whom **Estlander's Operation for Empyema** had been successfully performed. The following is the history of the case in brief:—Mrs. B., æt. 45, first became ill in October, 1901. On July 27th, 1902, the left side was found to be almost motionless during respiration; there were signs of a large amount of fluid; the temperature was 103°. Part of the 9th rib in the posterior axillary line was removed, and a good deal of pus evacuated. One month later part of the 8th rib was removed, and a second and smaller pus-containing cavity opened. On February 6th, 1904, a probe could be passed upwards to the level of the 1st rib; parts of the 5th, 6th, 7th, 8th and 9th ribs, with intervening soft parts and parietal pleura, were removed. On February 27th, 1904, parts of

the 2nd, 3rd and 4th ribs were similarly removed. Eleven days later symptoms of acute pericarditis appeared, but passed off rapidly on administering antistreptococcus serum. The patient improved until the following July, and then for 3½ months was melancholic. The wound is now healed, and the patient living her ordinary life.

Dr. ROXBURGH read a paper on a case of **Banti's Disease with Complications.** The patient (female), aged 48, presented symptoms of extreme anæmia, slight dilatation of the heart, enlargement of spleen and liver, a hectic temperature and deficient air entry, with crepitations in the left upper and right middle pulmonary lobes. These conditions had begun three months before admission (though dyspnœa on exertion had been observed two years earlier). On admission the liver reached 2½ inches below the right costal margin, and the spleen, which was peculiarly hard to the sense of touch, projected two finger breadths below the left costal edge. The blood count was erythrocytes, 2,320,000; leucocytes, 6,316; no poikilocytes; hæmoglobin decidedly diminished. In twenty-three days these figures had fallen respectively to 1,111,000 and 4,900; general pigmentation of the skin had become marked; and pulmonary signs more pronounced, including whispering pectoriloquy at the left apex. No tubercle bacilli were found in the scanty sputum. The spleen had increased in size, and the liver extended seven inches below the costal margin. Five weeks after admission, the patient died, and the autopsy showed, put very shortly:—Heart: Fatty degeneration. Lungs: Right firmly adherent in most of its extent to the thoracic wall and diaphragm; both lungs in a state of fibrous cirrhosis, the result of chronic interstitial pneumonia; no bronchiectasis, no caseation or tubercles. Bronchial glands large, hard, and black, as in anthracosis, but not tubercular. Spleen: 7.5 inches in length, tough and hard, with thickened capsule, on section fibrous; Malpighian bodies indefinite. Liver: Peculiarly formed, the right lobe extending almost to the iliac crest; the whole organ very firm and tense, in a state of fine cirrhosis with fatty degeneration. Kidneys and supra-renals normal. No tubercle of mesenteric glands, but the mesentery dotted with small black spots, probably former petechiæ. Microscopically, the extreme fibrosis of spleen, liver and lymphatic glands was confirmed. These irritative changes and the train of symptoms leading directly to death, pointed to some such chronic intoxication as that which presumably occurs in Banti's disease; but in the course of that syndrome the splenomegaly seems to precede the anæmia and enlargement of liver, sometimes by several years. In the absence of a complete history it was impossible to say whether such had been the case here. The chronic interstitial changes in the lungs may have been due directly (or indirectly, following a chronic interstitial inflammation) to the same toxin.

Dr. Armstrong's paper at last year's Toronto meeting of the British Medical Association gave an excellent *resumé* of the subject and a complete list of all the cases of Banti's disease up to that date treated by excision of the spleen. This list comprised 32 cases, with 23 recoveries, *i.e.* 72%. Dr. Armstrong concluded (1) that the disease is essentially progressive; (2) that no treatment other than splenectomy is permanently effective in removing the anæmia and hindering the hepatic cirrhosis; and (3) that even in advanced cases the operation is followed by immediate improvement, which often has a considerable amount of permanency. He laid special stress on the dilatation of the splenic vein, and even suggested that a primary endophlebitis of that vessel might set up the disease by causing backward pressure, injury to the vitality of the spleen pulp, and consequent production of an enzyme, which acted as a toxin to the liver. This was as yet purely theoretical, and the primary cause of the splenomegaly still remained obscure.—Dr. Roxburgh's paper was criticised by Dr. EDGEWORTH and Dr. MICHELL CLARKE. The former doubted whether the case properly should be classed as Banti's disease. The latter admitted the complexity of the case, and the great difficulty of its diagnosis.—Dr. ROXBURGH, in reply, affirmed his belief in the splenic origin of the symptom complex, while the pulmonary cirrhosis was probably an after effect, like the Hanot's cirrhosis of the liver, which was so constant.

Dr. CROUCH read a paper on a suggested **Treatment for Functional Aphonia.** (For this paper see p. 214.)

Dr. MICHELL CLARKE read a paper on the **Treatment of Graves's Disease.** (Vide p. 201.)

J. LACY FIRTH.
H. F. MOLE, *Hon. Sec.*

Local Medical Notes.

University College, Bristol.—Examination Results:—
M.B. LOND.—*Intermediate Examination:* P. J. Veale.
F.R.C.S.—*Primary Examination:* E. A. Dorrell.
CONJOINT BOARD.—*Practical Pharmacy:* H. H. Hiley, V. Pinnock. *Chemistry and Physics:* H. B. Logan, G. H. Piercy, W. Worger, B. G. Derry, A. G. T. Fisher. *Anatomy and Physiology:* G. H. Griffiths, W. A. Reynolds, M. M. Lopez, R. S. S Statham, H. R. B. Hull. *Medicine:* F. T. Boucher, A. E. Iles*. *Surgery:* F. S. Scott.

* Completes Examination.

L.D.S. ENG.—*Chemistry and Physics:* L. J. Kinnersley, J. D. Melhuish. *Physics only:* G. Smith.

INDIAN MEDICAL SERVICE.—At the recent examination for appointments in the Indian Medical Service, three students of University College, Bristol, were successful. Mr. V. B. Green-Armytage gaining second place, with 3,834 marks; Mr. Francis Shingleton Smith, M.B. Cantab., tenth place, with 3,410 marks; and Mr. A. N. Thomas, fourteenth place, with 3,283 marks. There were thirty-four candidates for the examination, and of these twenty-seven qualified to sit for the examination.

DENTAL DEPARTMENT.—It is now possible for students to undertake their Mechanical Dentistry and Metallurgy on the College premises, where laboratories have been fitted out with all the latest apparati for this purpose. The composition fee for the entire curriculum, including Hospital practice and *two* years' mechanical work in the laboratory, is 140 guineas.

The following appointments have recently been made:—Carey F. Coombs, M.D., B.S. Lond., Demonstrator in Dental Bacteriology; E. A. G. Dowling, L.R.C.P., M.R.C.S., L.D.S., Lecturer in Dental Anatomy, Physiology, and Dental Histology; Frederick W. Perry, L.D.S., Demonstrator in Dental Anatomy, Physiology and Dental Histology; J. W. McBain, M.A., Lecturer in Dental Metallurgy and Practical Dental Metallurgy; Reginald Davis, Instructor in Dental Mechanics; W. J. Lennox, L.D.S. Eng., Honorary Demonstrator in Physiology.

ADMISSION OF WOMEN STUDENTS TO MEDICAL DEPARTMENT.—We understand that the Council of the College has undertaken the important step of admitting women to the full medical curriculum. Previously they had been allowed to attend certain lectures, but this privilege had not to any great extent been taken advantage of. The rules now admit them to the whole course on exactly the same footing as men.

Bristol General Hospital.—J. Odery Symes, M.D. Lond., has been appointed Physician, and Carey F. Coombs, M.D. Lond., has been appointed Assistant Physician.

Dr. John Beddoe.—An interesting ceremony took place recently at the Bristol Art Gallery, when a portrait of Dr. Beddoe, by Miss Wren, was handed over to the chairman of the Museum Committee for hanging in the Bristol Room. It had been subscribed for by Dr. Beddoe's friends and admirers, who wished to have some permanent momento of this great ethnologist, who had lived and worked in the city for so many years. Dr. Beddoe, who was present, thanked the speakers for their kind expressions of affection.